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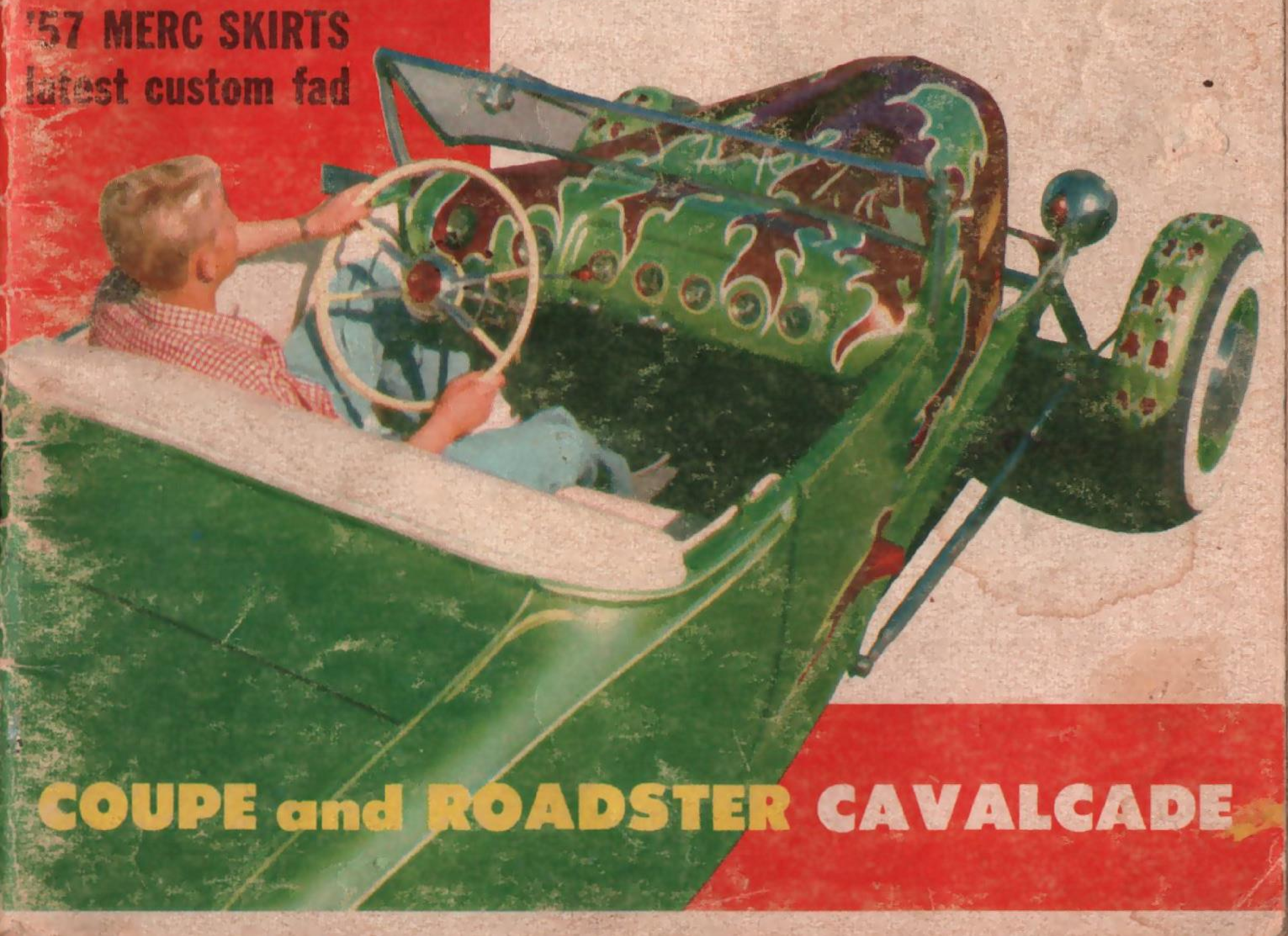

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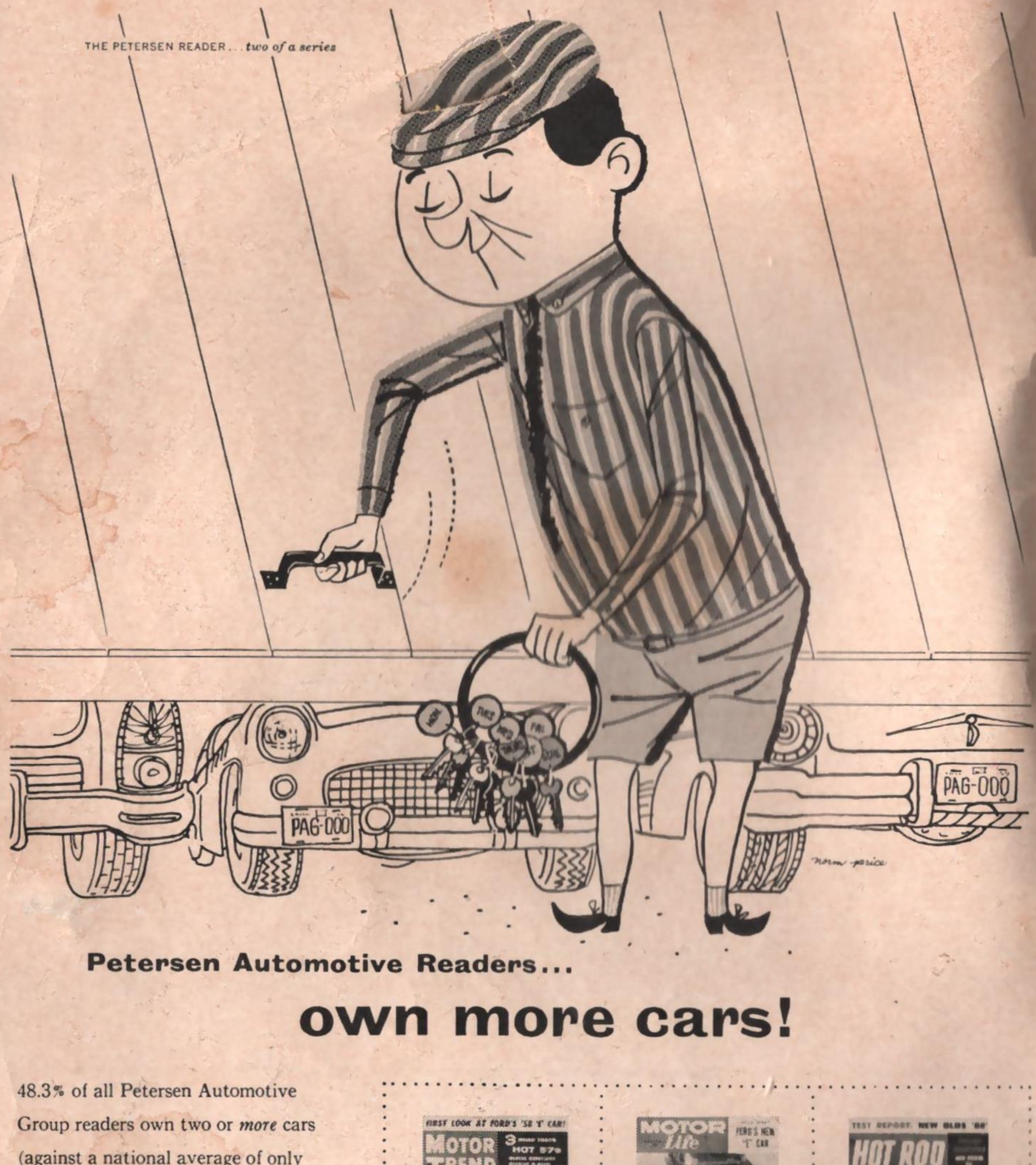
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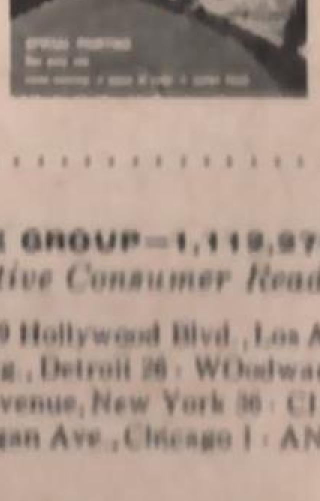
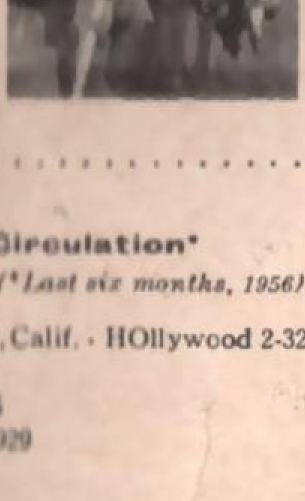
MOTOR TREND
3
HOT 57s


MOTOR Life
FORD'S NEW 'E' CAR


TEST REPORT: NEW OLDS '58
HOT ROD

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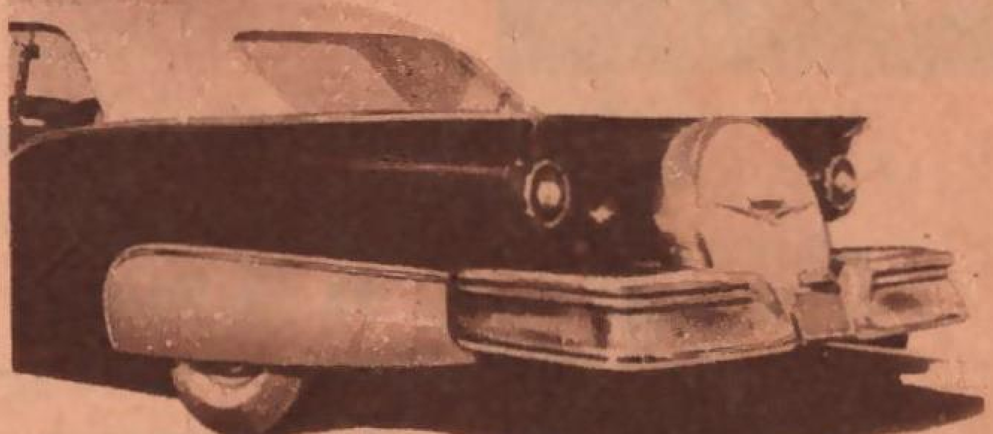

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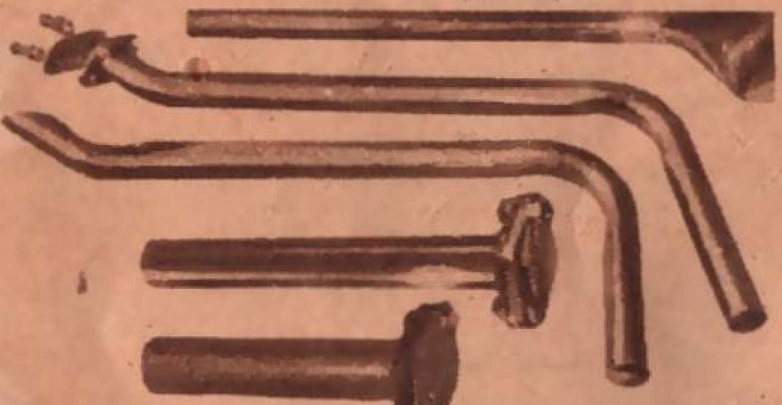

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☐ Send Discount Card ($1.00 enclosed), and give me extra discount (s) on above order.
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CAR CRAFT

The "Custom Car" Magazine

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cover

George Sein's '32 Ford 5-window coupe and Tom Pollard's '29 "A" roadster are the streetrods merrily flaming their way across the front of Car Craft this month — for more of the same, turn to the pictorial calvalcade of coupes, roadsters and sedans beginning on page 10.

—Anscochromes by Eric Rickman and George Barris

CAR CRAFT

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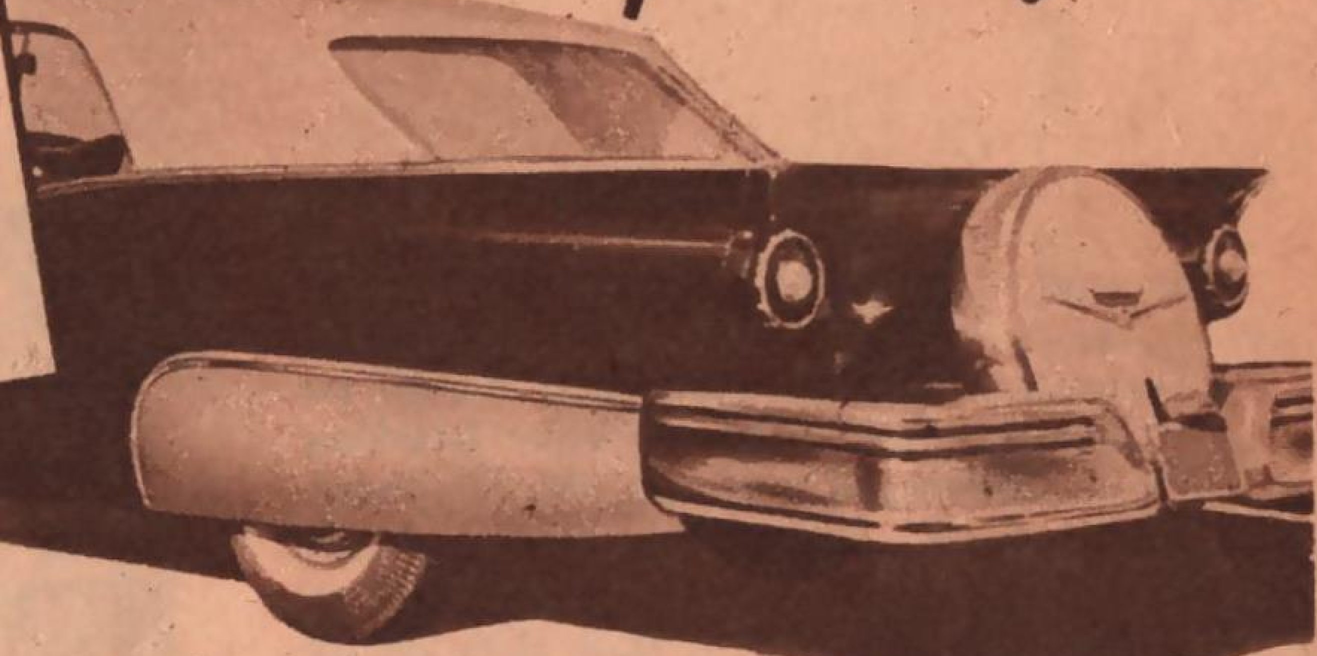

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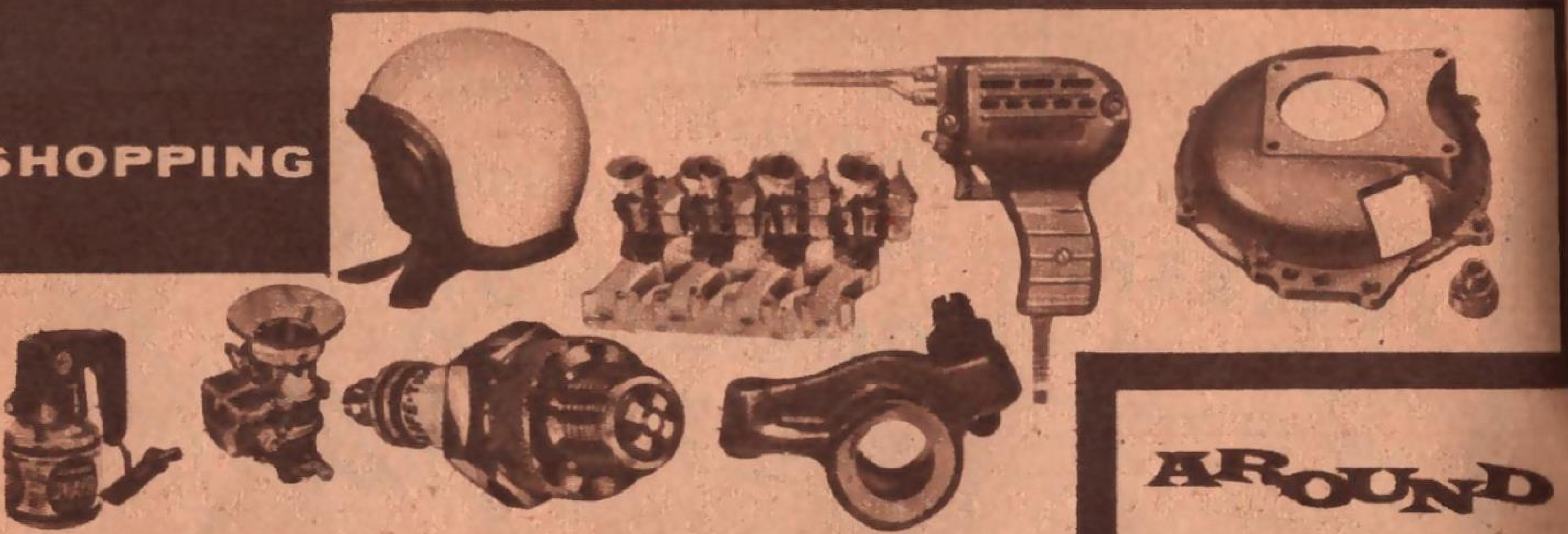

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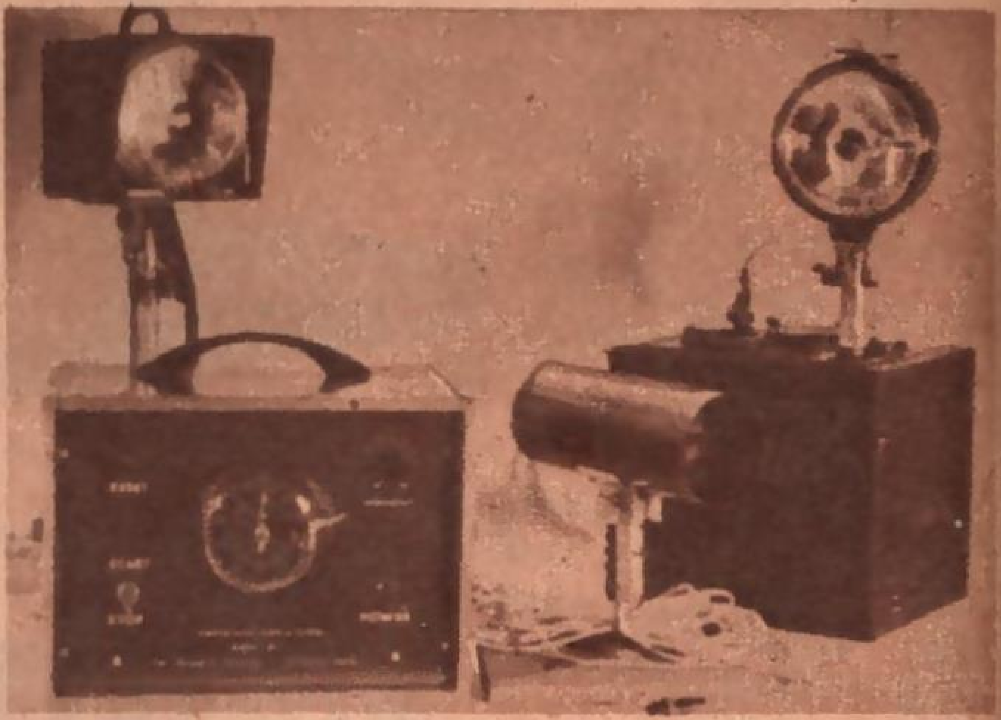
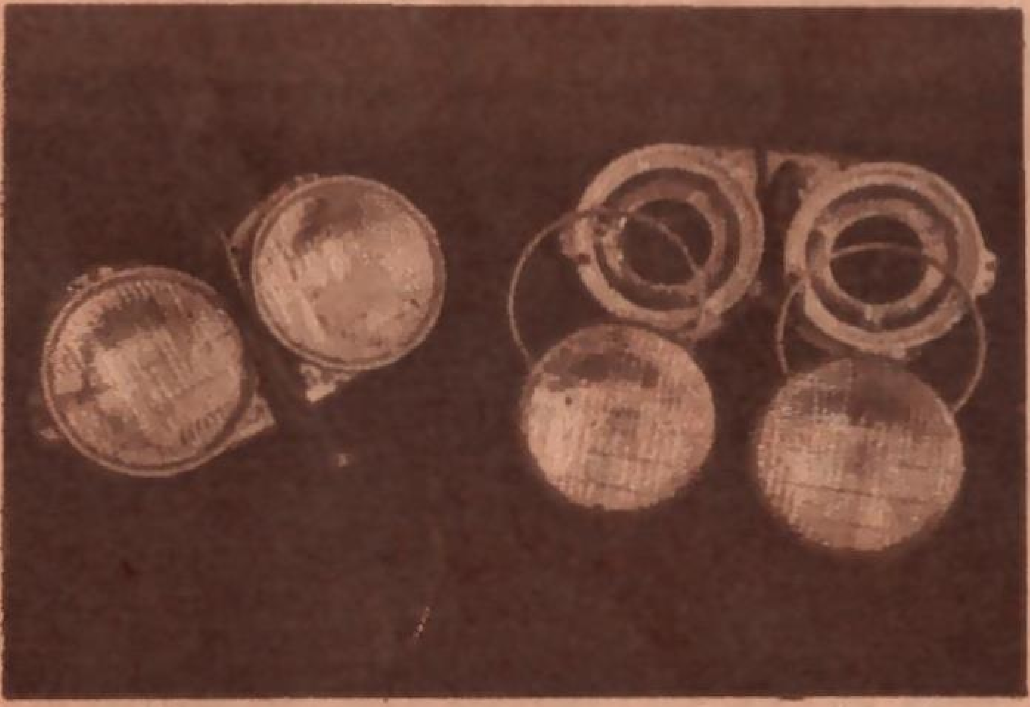
This unit was expressly designed to answer the universal demand of track racing associations for a timer that would be both accurate and inexpensive. Reading in hundredths of a second, the Chrondek M-3 features an electronic control circuit operated by a photo-electric pickup actuating a stop watch, thus eliminating human error completely. For further information on units produced by this manufacturer, write: The Chrondek Company, Dept. CC, P.O. Box 131, La Verne, Calif.



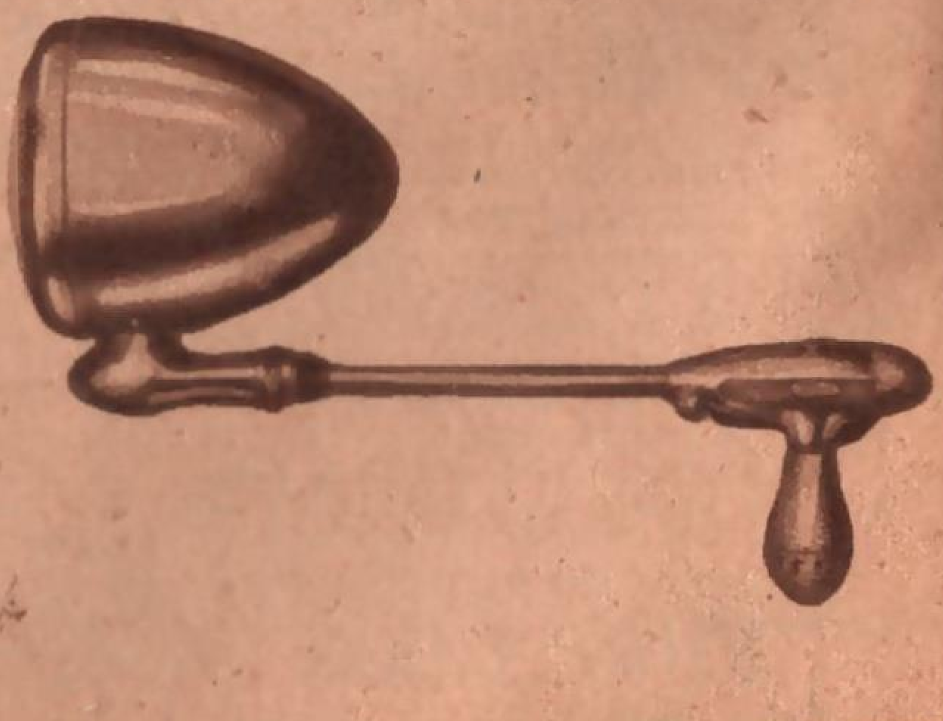


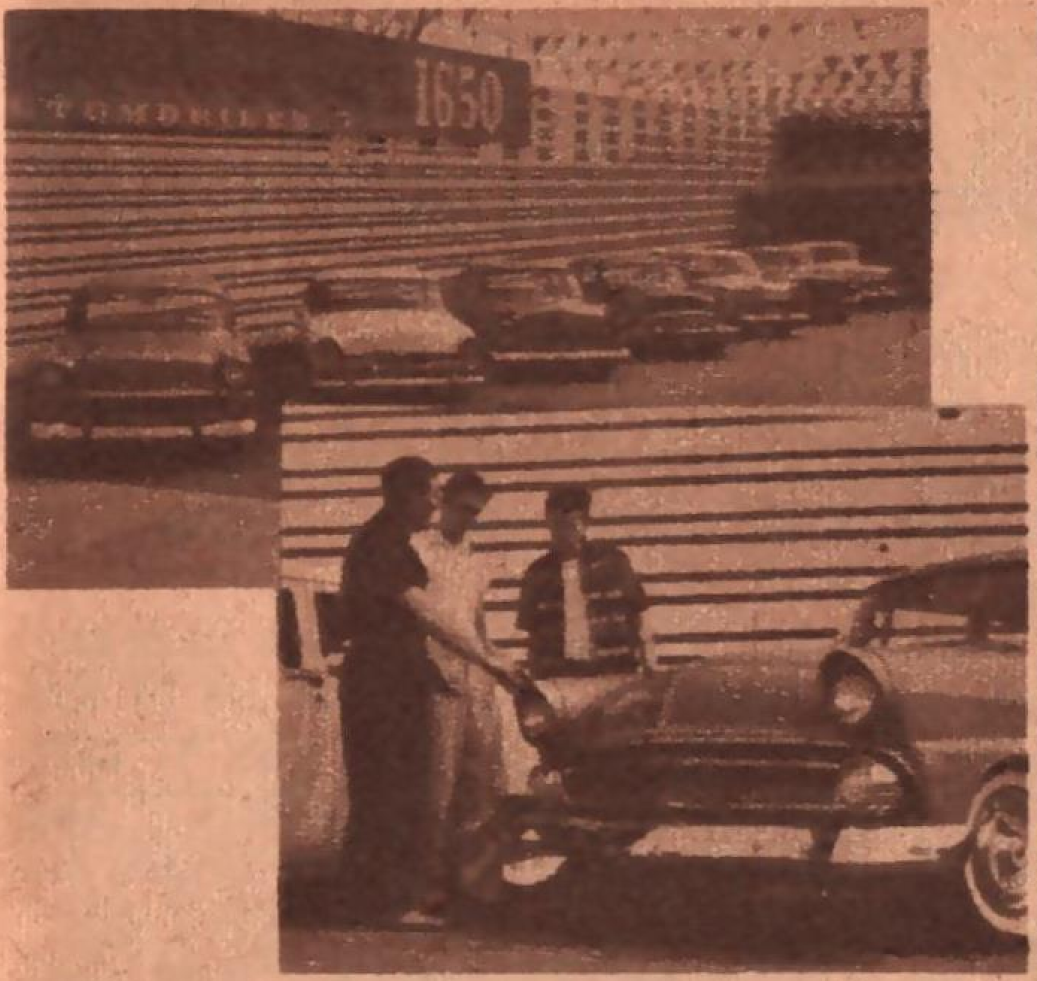
UNIVERSAL QUAD HEADLIGHT

For all you custom enthusiasts who have been yearning for that '57 look in headlight styling — now's your chance. Just released on the market are these 6 and 12 volt quad headlight units. Complete with bulbs, wiring, adjusting and mounting bucket. Price, $29.95 a set. Write: Lee Rockwell, Box 1, Tustin, California.

TEARDROP SPOTLIGHTS

The sensational "Teardrop" spotlights are back on the market — The light is the famous Appleton brand. Construction features include a five-inch sealed beam lens, a full 360° turning radius, and genuine jeweler's chrome finish. Price $22.50 each. Make and year of car should be specified when ordering. Write: Eastern Auto Supply Co., 3319 So. Grand Ave., Los Angeles, Calif.





NEW CUSTOM CAR LOT

Although used car lots specializing in rods and customs aren't unique anymore, one that builds-up its own custom rolling stock is news! Pioneering in this type of business is Marvin Lee, of Pasadena, California, former dry-lakes and Bonneville record-hoding hot rodder. "Starvin' Marvin's" car lot, 1650 E. Colorado Blvd., Pasadena, is already renowned as being the only lot in the world where all the cars are potential auto show semi-custom class winners — *before* they're sold!

CAD-LASALLE GEARBOX CONVERSIONS

Complete conversion kit adapts Cadillac and LaSalle transmissions to '32-'48 Ford torque tube drive shafts. Shortened, resplined mainshaft, machined rear bearing retainer, gaskets and snap rings make it a simple job to eliminate long tail housing on Cad-LaSalle transmissions and convert them to accept Ford U-joint. Modified trans bolts directly to '32-'48 Ford rear frame mounts. Floor-shift kits, $32.50; side-shift kits $27.50. Write: Transmission Specialists, 355-cc E. Manchester, Los Angeles 3, California.

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COMPLETE OWNER'S HANDBOOK
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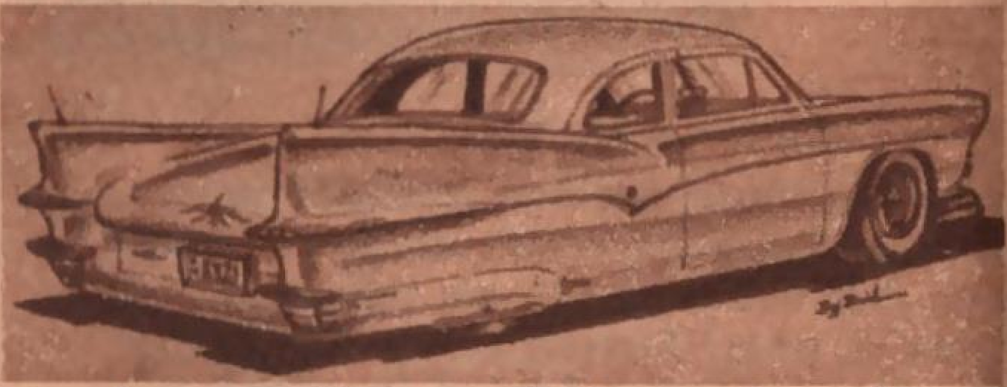
LETTERS

YOUNG TALENT

Dear Sir:

I have enclosed a sketch of a '49-'50 Ford which is an original design, inspired by your article on fins and the restyling popularity of the '49-'50 Ford product.

My rendering is intended to be a fresh and up-to-date approach through the use of the now-popular fiberglass medium. The '57 look is accomplished by extending the deck 8" and the fenders 14". There is no need in this design for reworking any body panel, so the restyle would not entail exceptionally difficult or expensive work.



I am 17, an amateur striper, and have a '38 Ford coupe which (except for lack of $$$) is coming along nicely with new paint, upholstery, '48 engine, column shift, Columbia O. D., etc. I will send pictures upon completion. Really think your magaine is great and has a treasure of restyling ideas for all types of cars. Keep the Cadaret pics coming.

—Thomas "Bud" Rogers,
Denver, Colorado

Looks like all the restyling talent isn't in either Detroit or Italy after all — dig Bud's drawing and you'll see what we mean. — Ed.

QUARTER MIDGETS

Dear Sir:

I would like to inquire about the availability of Quarter Midget construction kits. I'm 14 years old, and a real rod fan, but am too young for a highway driving license so I thought I'd built up a Q.M. I can't go much over $125 right now; do you know of anything in the way of a kit around that price?

—Jim King,
Leavenworth, Kansas

Most Q. M. cars cost around twice that much in kit form, Jim, but if you contact some of the manufacturers advertising their kits in Car Craft you might be able to purchase a kit in sections from one of them — sort of a pay as you build plan, like the kit-boat makers feature. — Ed.

Dear Sir:

We are in the process of organizing a Quarter Midget racing club here in the Chicago area. We would like very much to obtain a specimen constitution, by-laws, and charter to use as an outline in making out application for charter to operate as a non-profit organization in the State of Illinois, and would be glad to receive any suggestions you might have.

— *G. B. Peterson,*
Riverside, Illinois

Your letter is typical of the many we have received asking for similar information, Mr. Peterson—may we suggest you contact: United Quarter Midget Association, 259 N. Robertson Boulevard, Beverly Hills, California. — Ed.

Dear Sir:

Here's a picture of my Quarter Midget. The engine has been modified with J. E. pistons, Evans head, advanced timing, port and relieve.

Would you give me some info on where I can purchase the billet con-rod shown in your December issue?

— *Don Carpenter,*
Redondo Beach, Calif.

The part you mention is a recent addition to the line of Earl Evans, whose equipment you're already familiar with by running one of his special heads. Just in case you lost the address, it's Evans Speed Equipment, 2550 No. Seaman Ave., El Monte, California. — Ed.

CLUB PAGE?

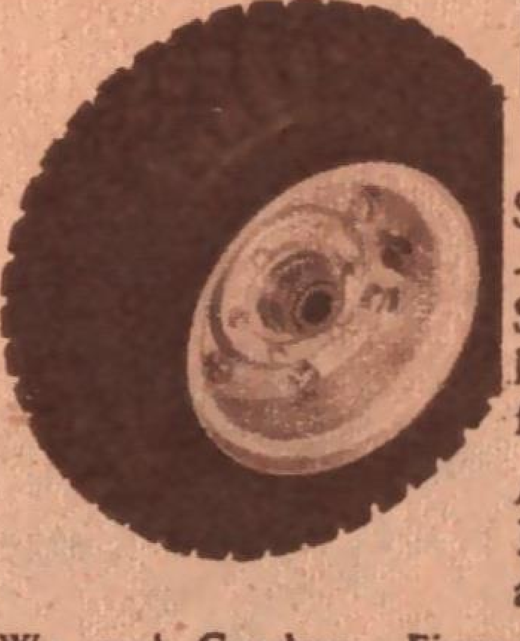
Dear Sir:

While reading through the last issue of Car Craft I was struck with an idea — how about setting aside a page for rod and custom clubs? This would provide a central point to find out what the other clubs are doing around the country.

— *Alvin Stten,*
Elkhorn, Wisconsin

What about it readers? — this is still your magazine! — Ed.

1/4 Midget Racing WHEELS



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NOW AVAILABLE This car chromed and painted your color complete ready to run, plus tax, F.O.B. Anaheim $469.00

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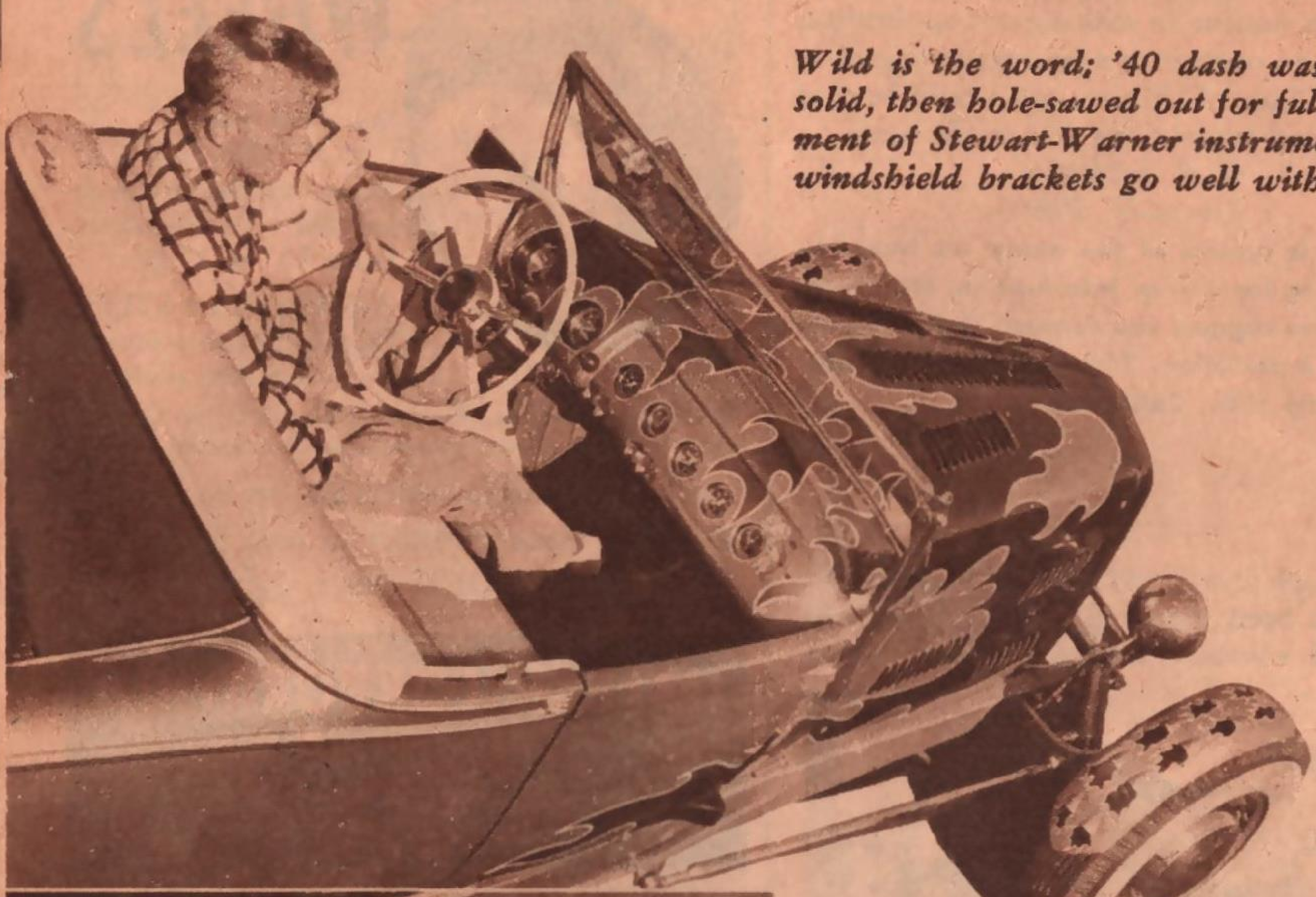
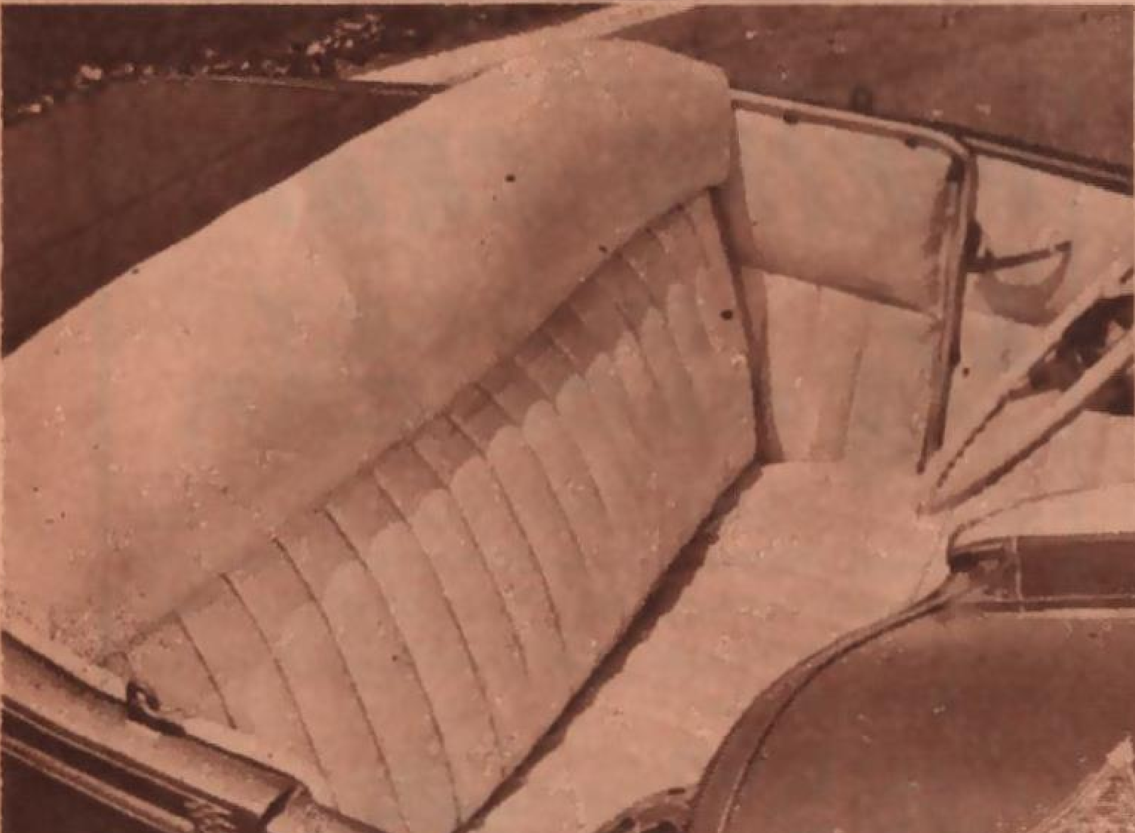
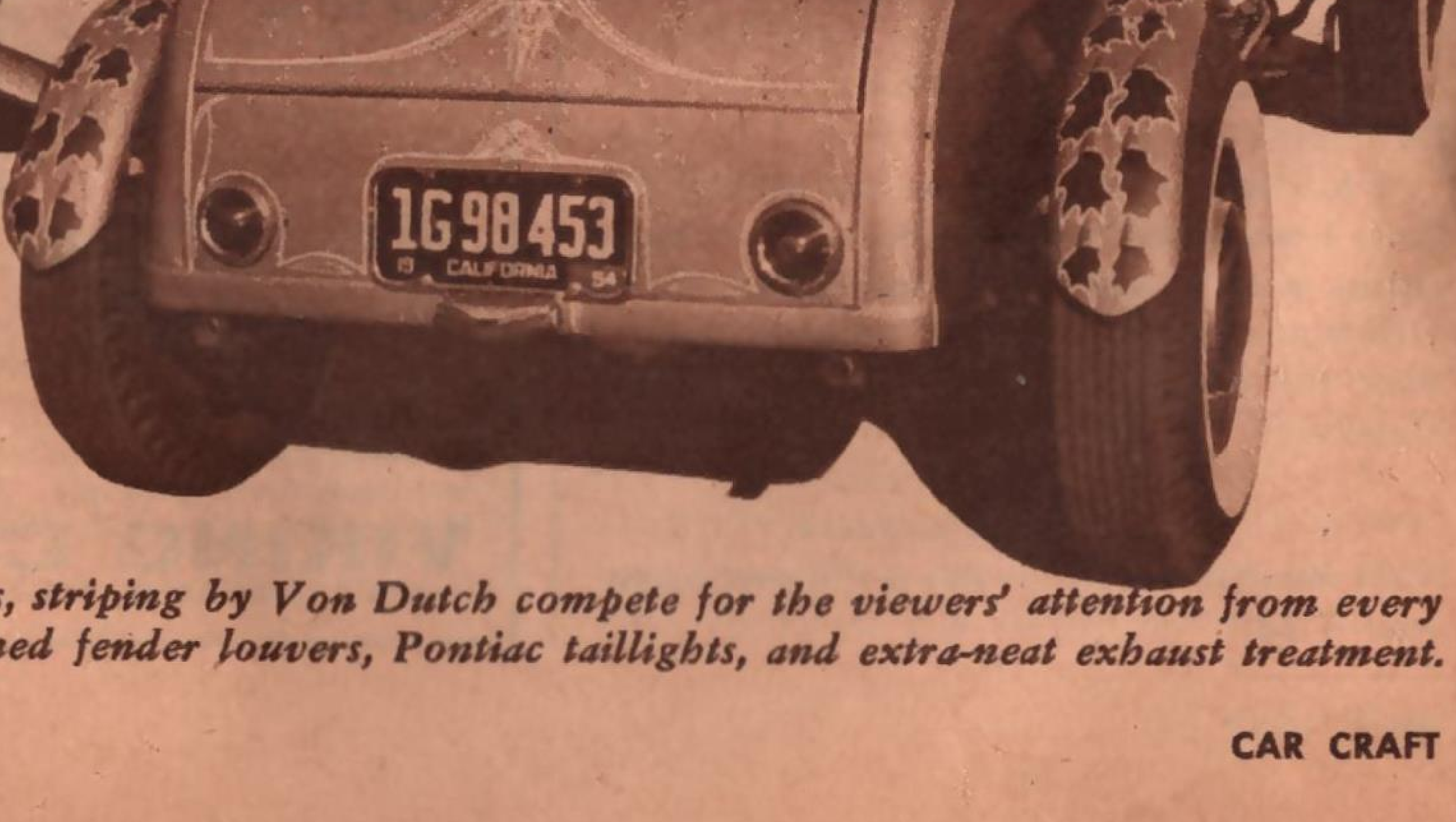
Cavalcade OF STREET



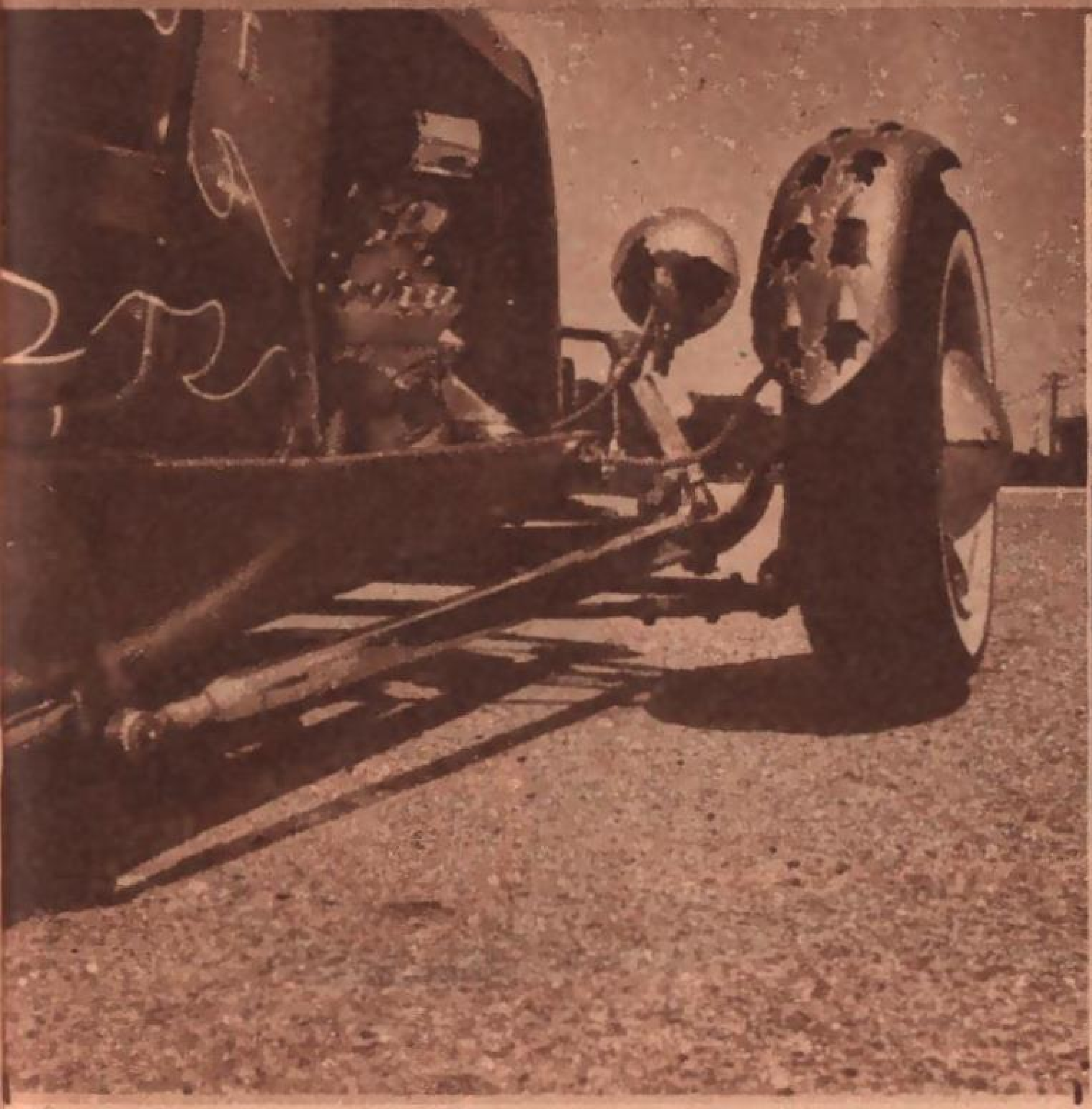
Wild is the word; '40 dash was filled-in solid, then hole-sawed out for full complement of Stewart-Warner instruments. "T" windshield brackets go well with '29 "A."



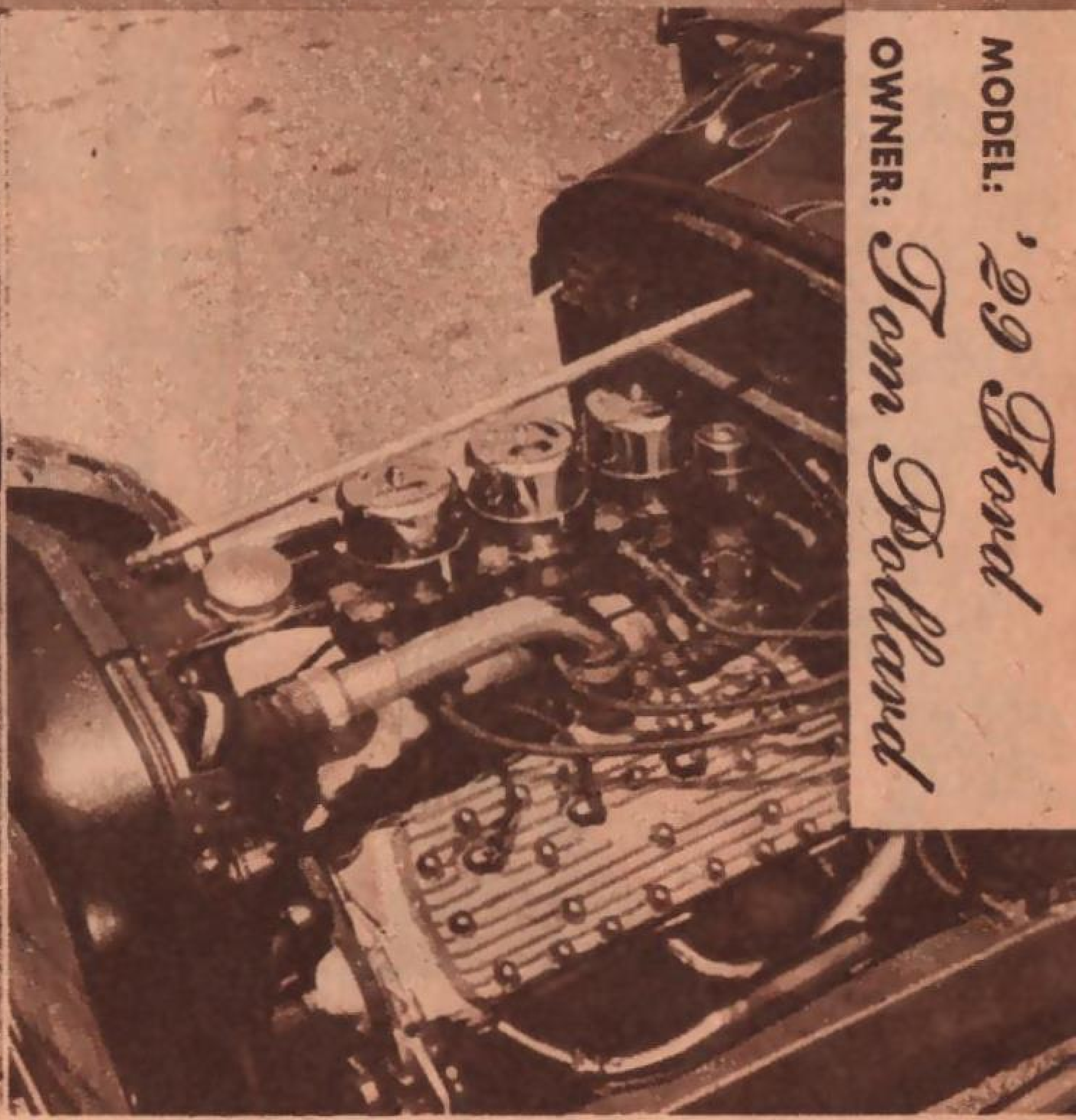
Mark of the California roadster, huge roll of white naugahyde tops off the padded and pleated cockpit interior of Pollard's '29.



Flames by Barris, striping by Von Dutch compete for the viewers' attention from every angle. Note flamed fender louvers, Pontiac taillights, and extra-neat exhaust treatment.



Late style steering and tube shocks improve handling. Headlights are tried and true King Bee sealbeam units. Dropped axle, and straight crossmember lower front end.



MODEL: '29 Ford

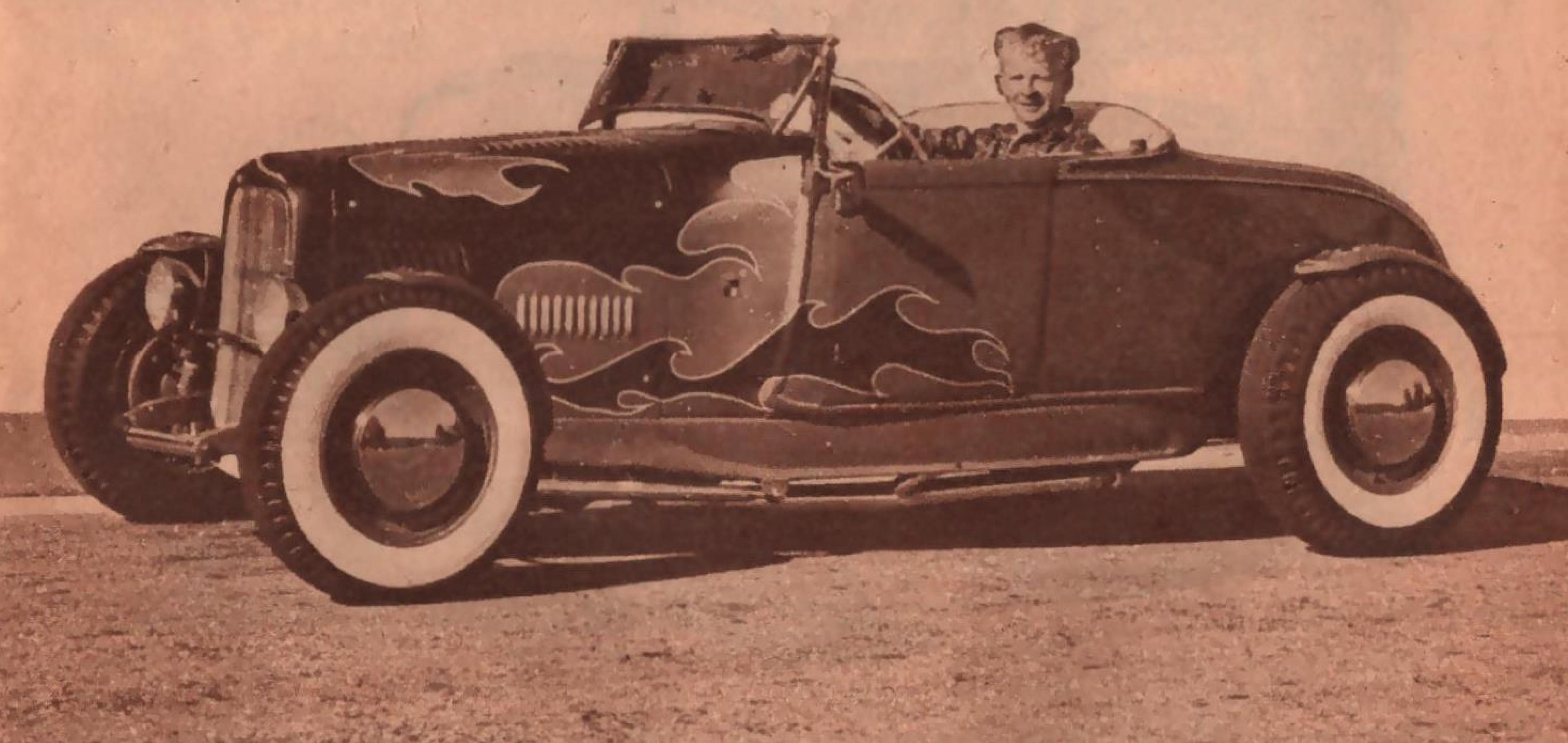
OWNER: Tom Pollard

⅜ x ⅜ mill by Tom Lewis sports K-H Bonneville .400 cam, H & C mag, Edelbrock heads and manifold. Custom headers by Sonny's Mufflers take care of exhaust.

Photos by Eric Rickman

COVER CAR

A casual bash at the Santa Ana Drags revealed a consistent ability to break the "century" barrier, running in street trim.



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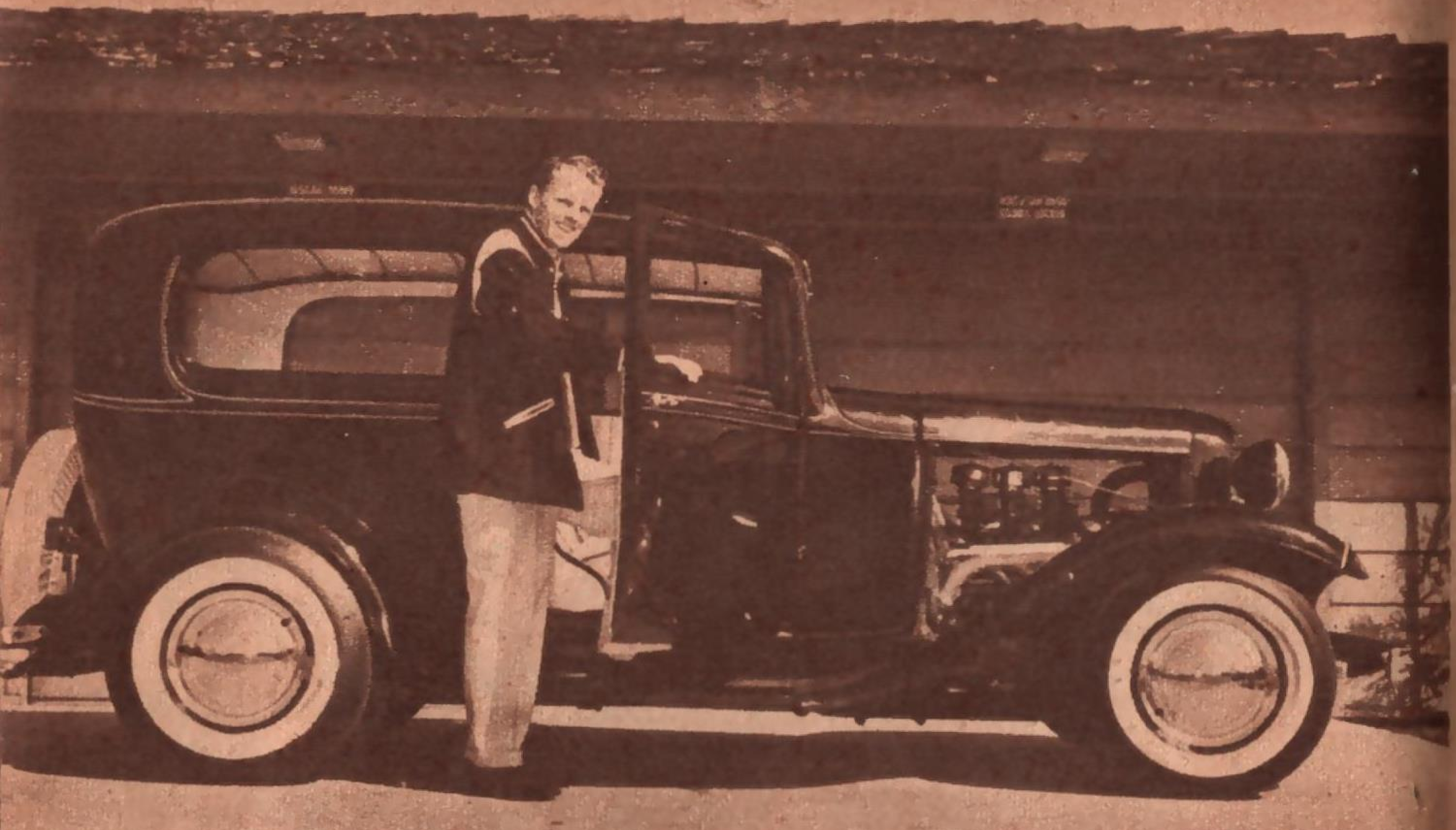


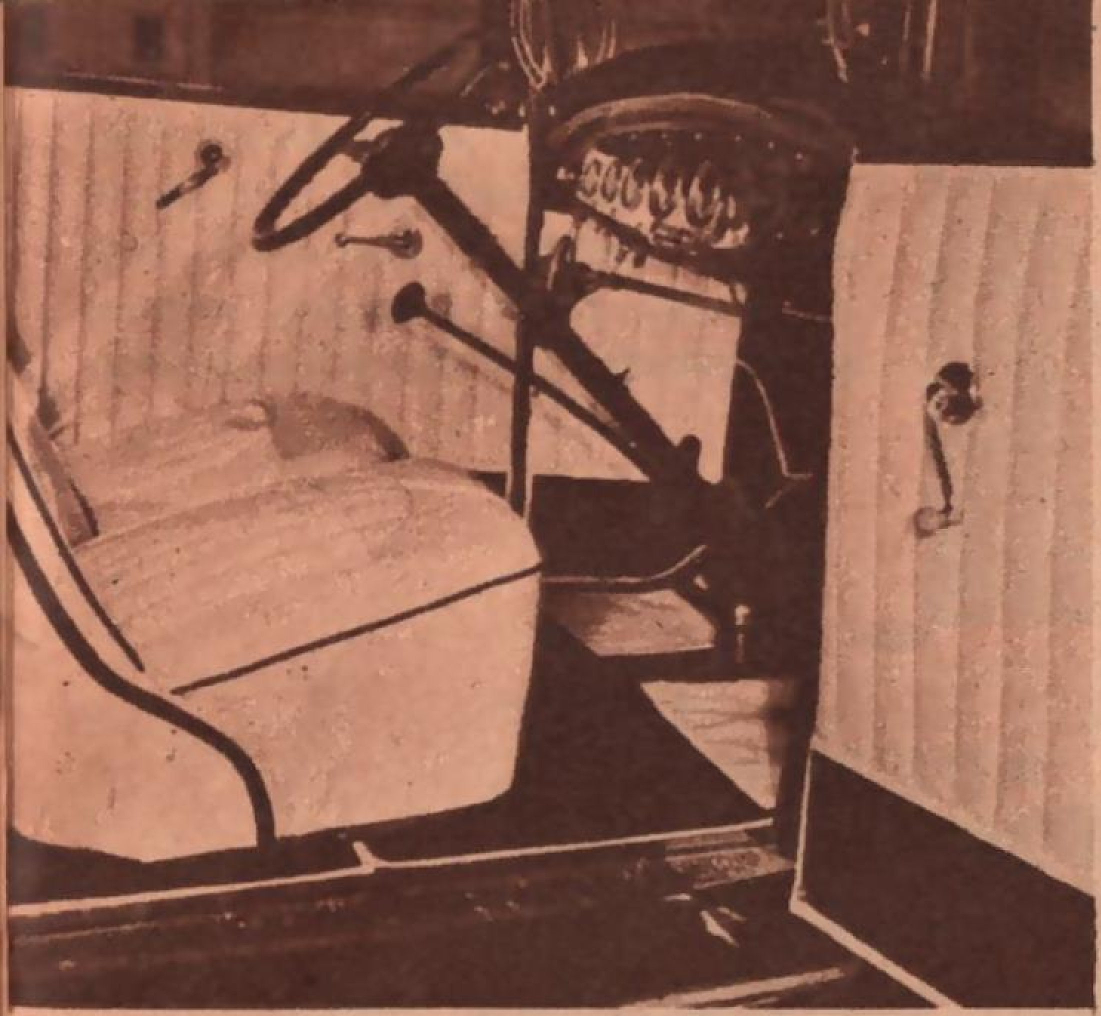
Dissatisfied with the way his Deuce handled after the '54 Merc engine was installed, Bailey boxed the frame rails and put in an X-member — Look out sports cars, beware!

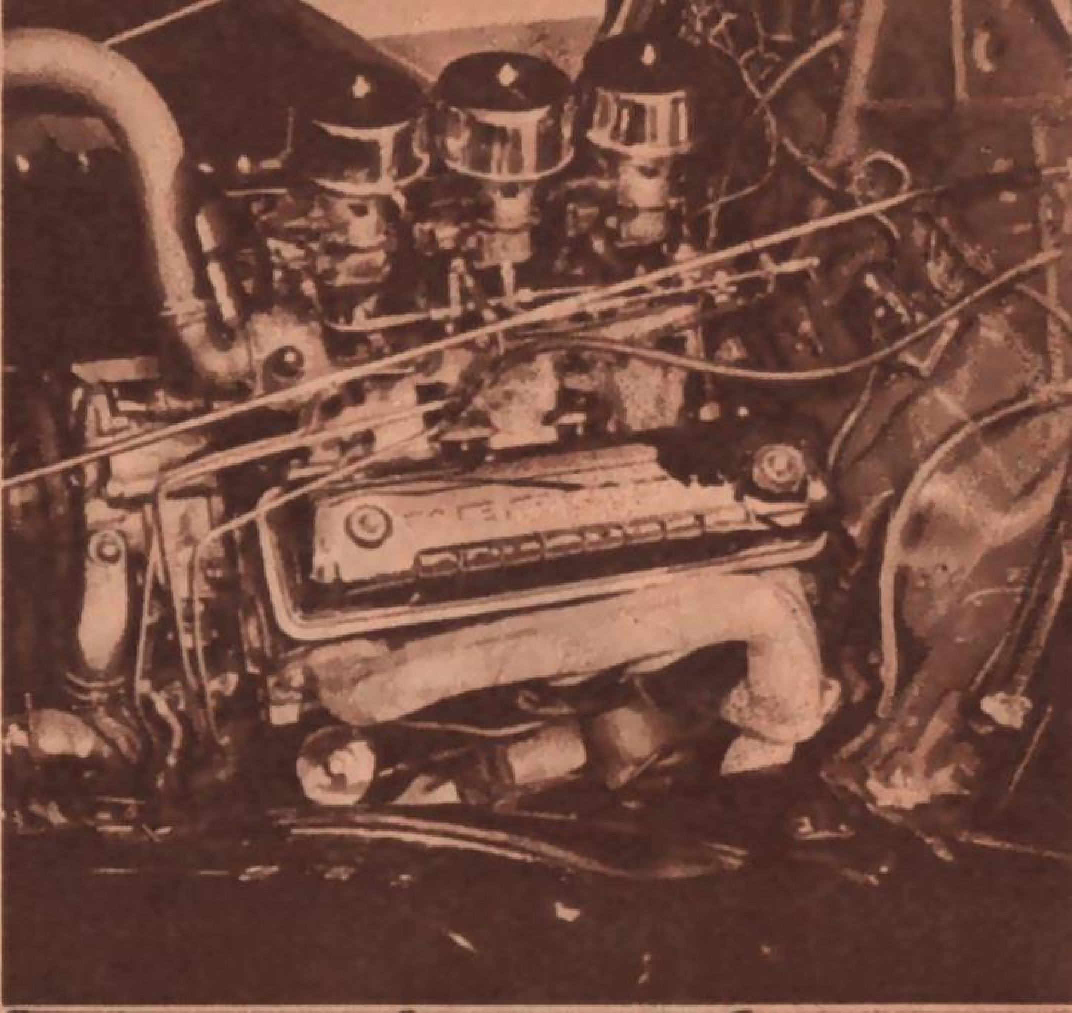
Cavalcade SEDAN

continued

Photos by Bob Hardee

Cooling the overhead required a wider radiator so the deuce shell was enlarged to 3"; external filler was discarded. '40 Ford rear-end accounts for the extra tread-width.





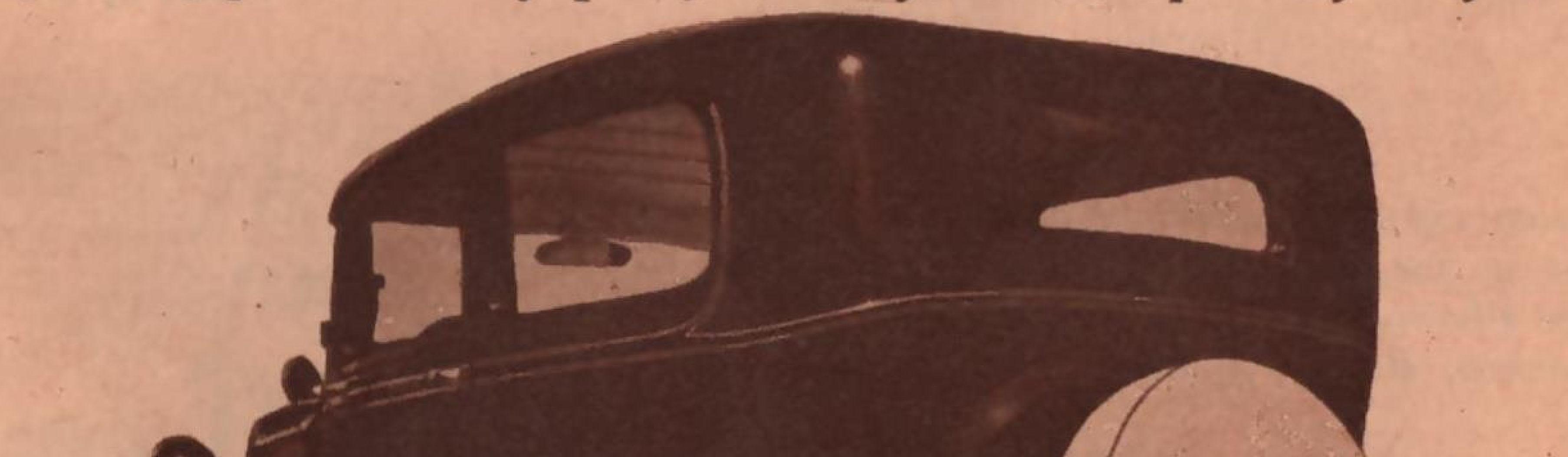
Black and white naugahyde interior accents chromed dash and accessories. Deuce box carries on under new management.

Engine is real sleeper, has Dempsey Wilson full race cam, H & C ignition, Edelbrock manifold and a Fenton exhaust system.

MODEL: *'32 Ford*
OWNER: *Carl Bailey*

Ever been in an ambulance? You'd find it no cleaner than the rear compartment of Bailey's Deuce. Upholstery is by Kizer's.

White naugahyde spare-cover and "just like Henry wanted it" striping set off the black lacquer finish of polished ebony quality.



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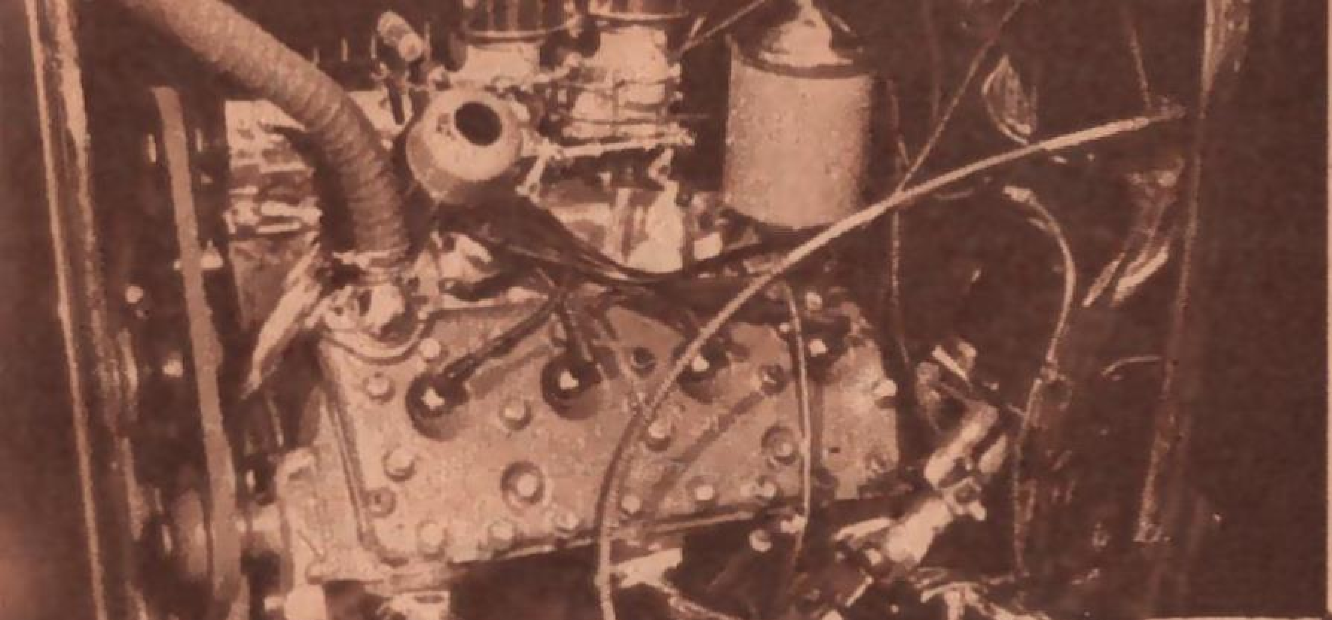
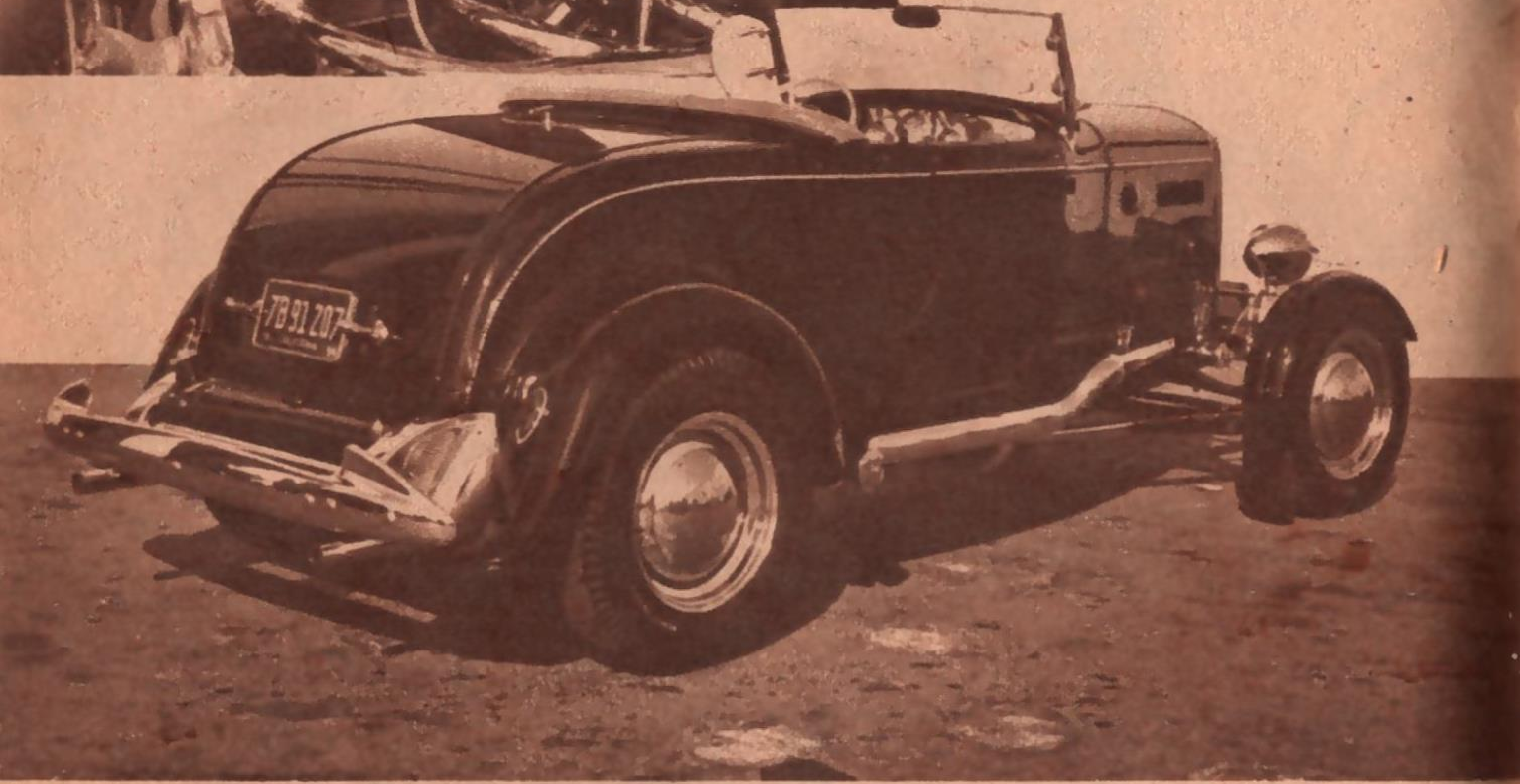


A '51 Ford of stock dimensions supplies the push for the Bosio deuce. Chromed gas tank supports '41 Olds bumper; creates unusual effect in rear view, below.



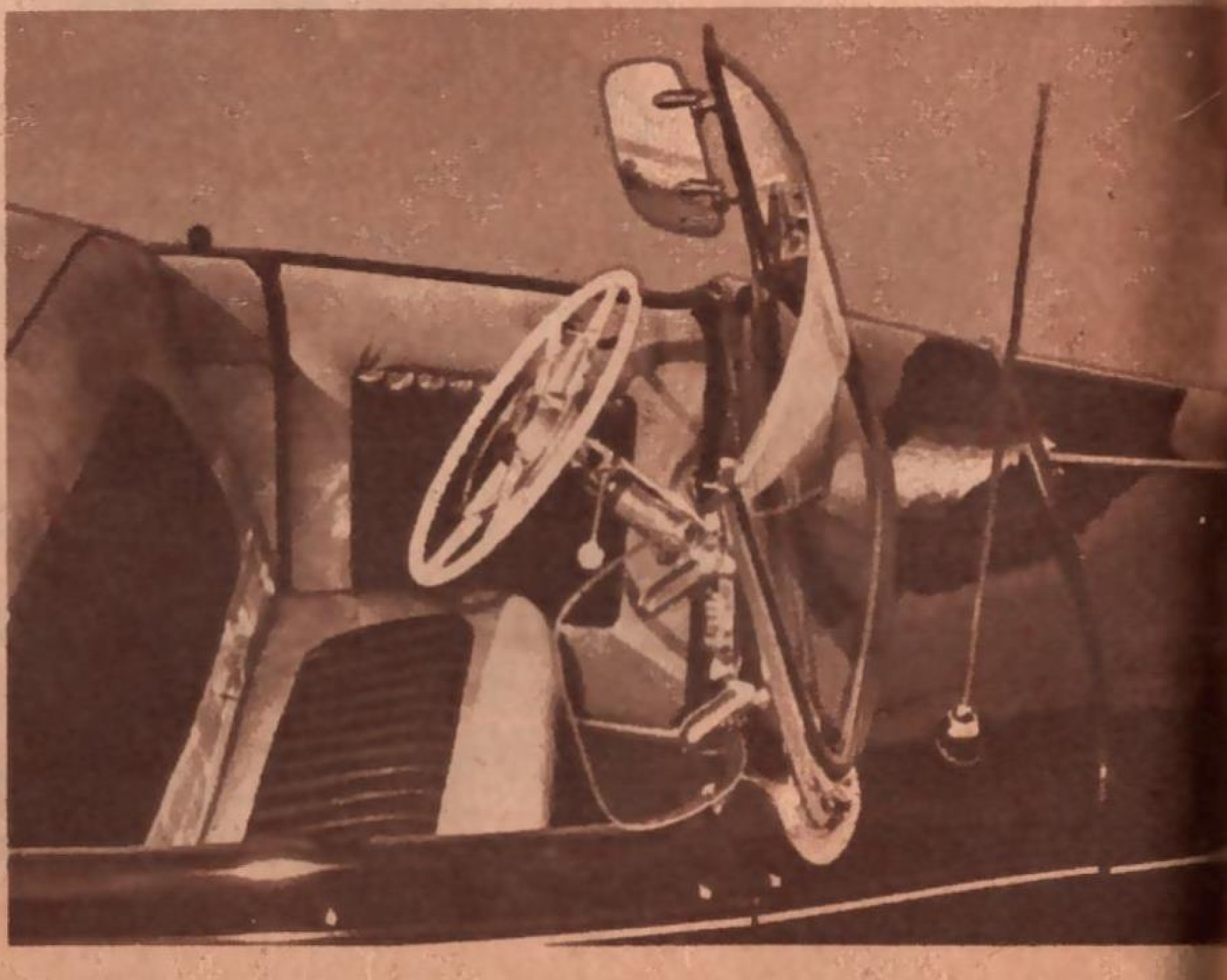
Cavalcade ROADSTER

continued

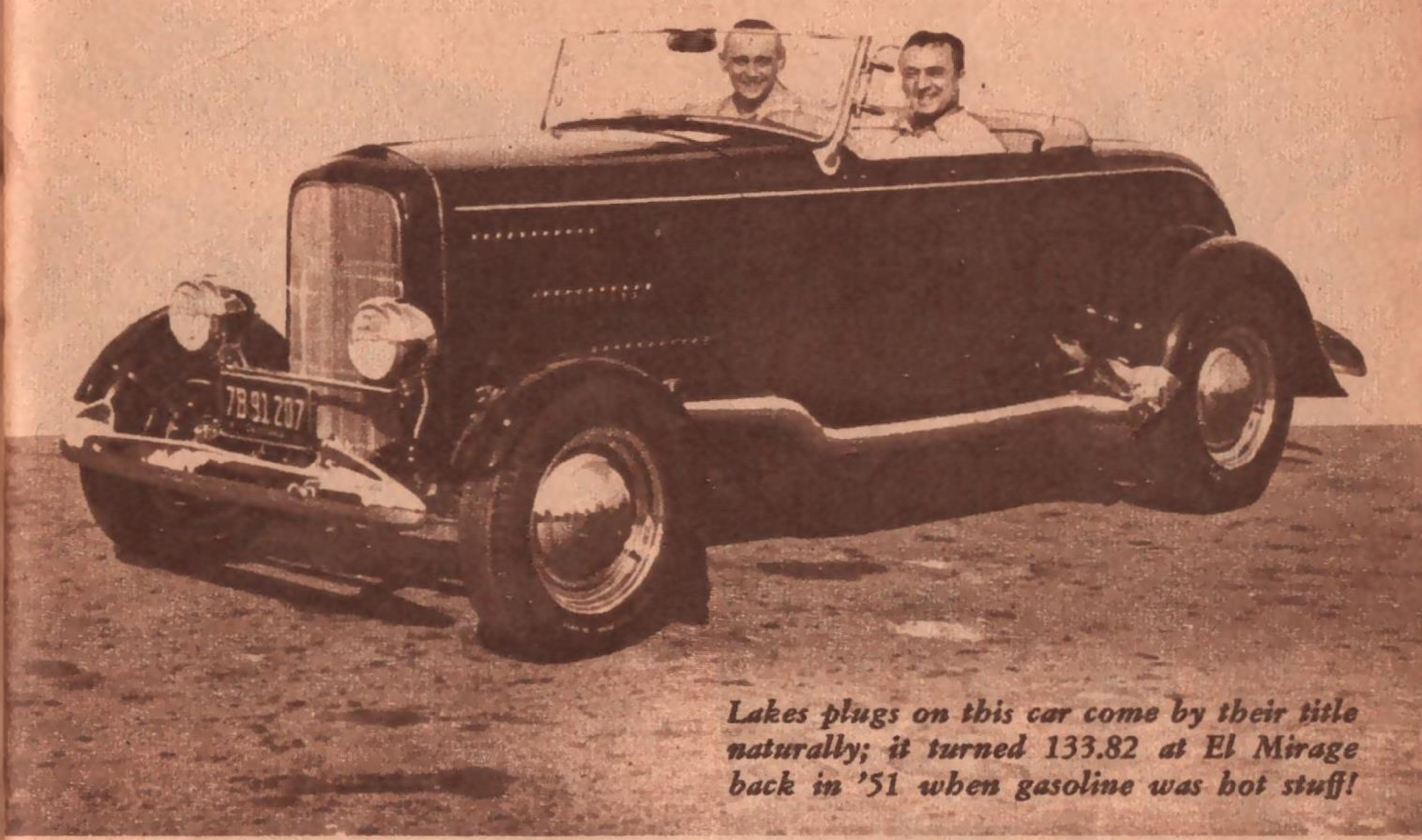
Photos by Eric Rickman

Custom curved windshield was built up for Bosio by the Burridge Plating Company in San Francisco, Bosio's home town.

Sturdy brackets support cycle fenders, are plated to blend with other front end components that were to be given the dip.

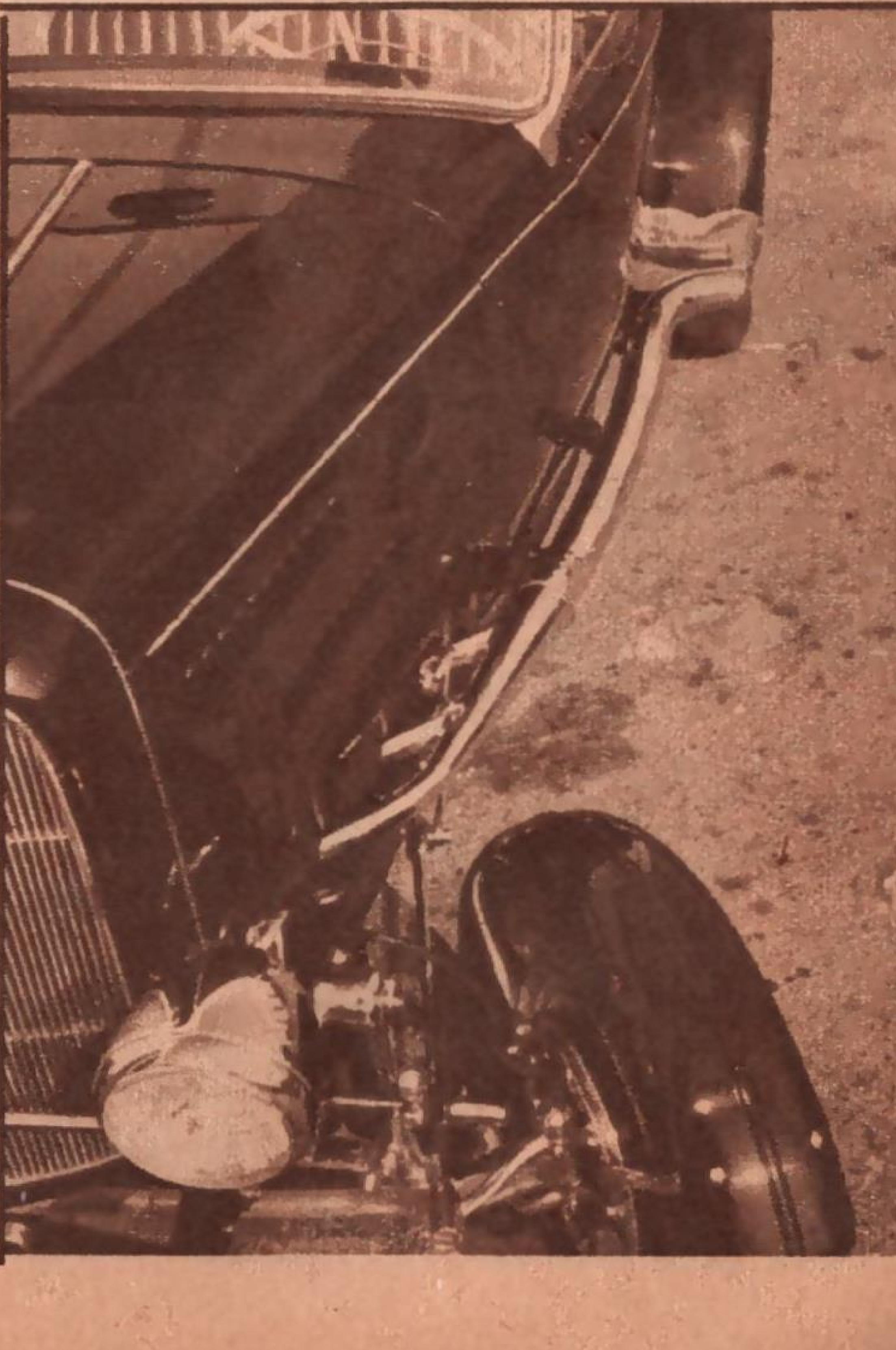


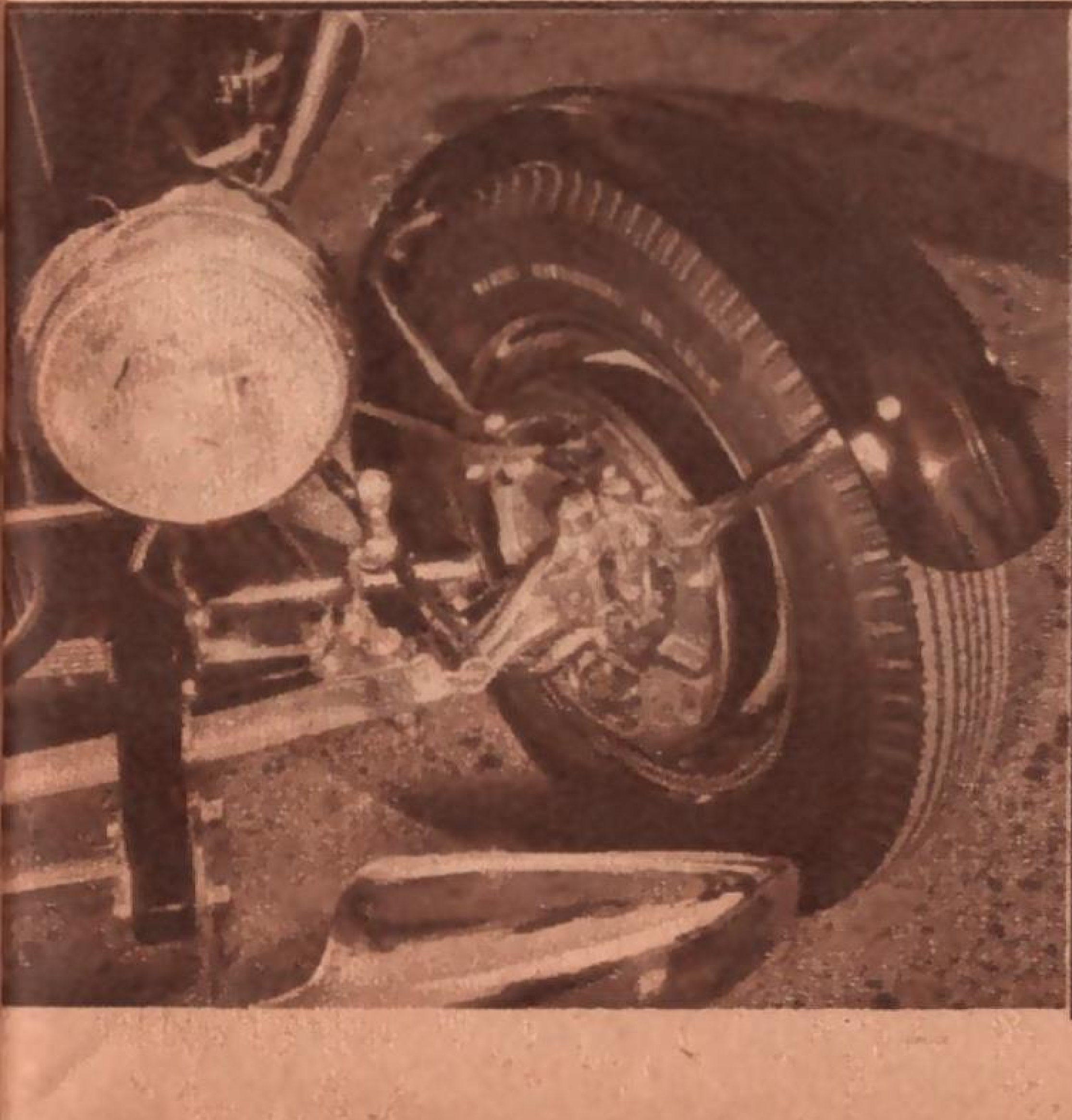
Formerly owned by Vic Edelbrock, Bosio's '32 won the coveted "America's Most Beautiful Roadster" title at the '56 National Roadster Show held in Oakland, California.

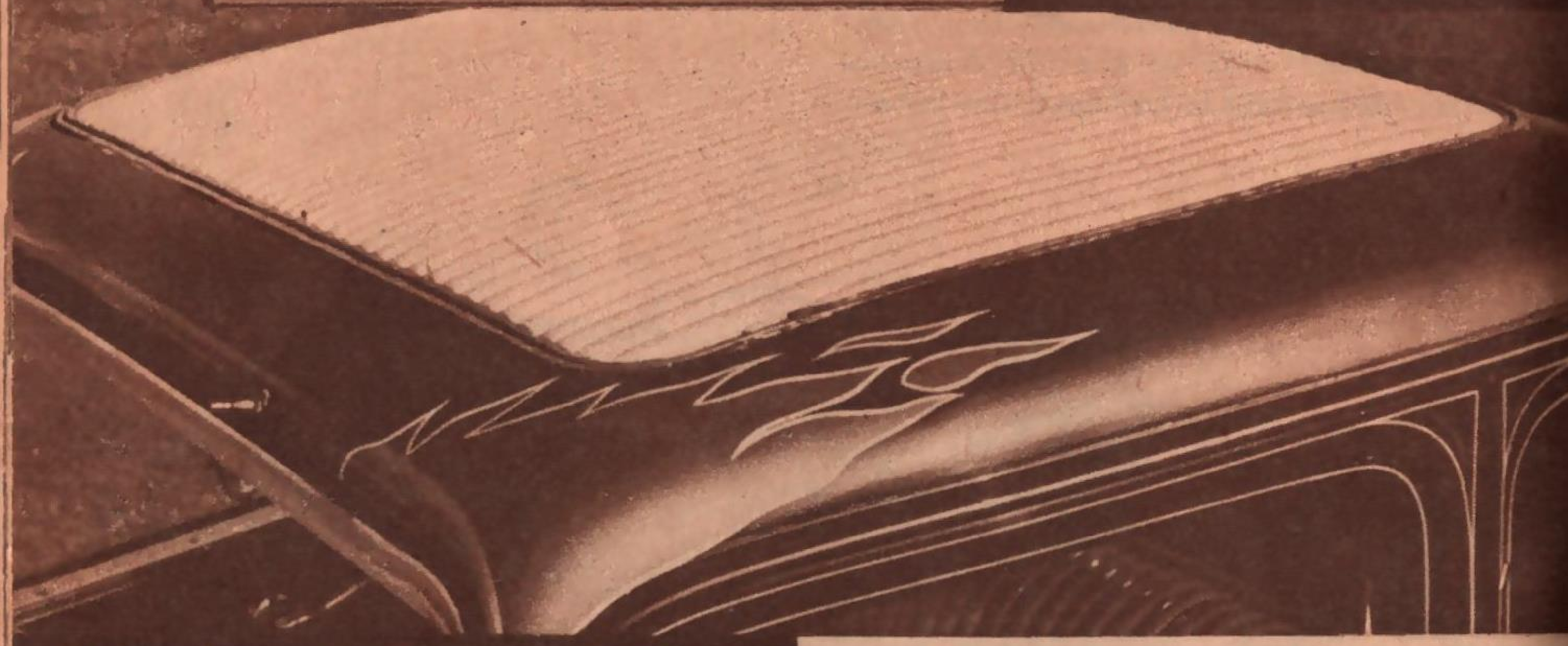


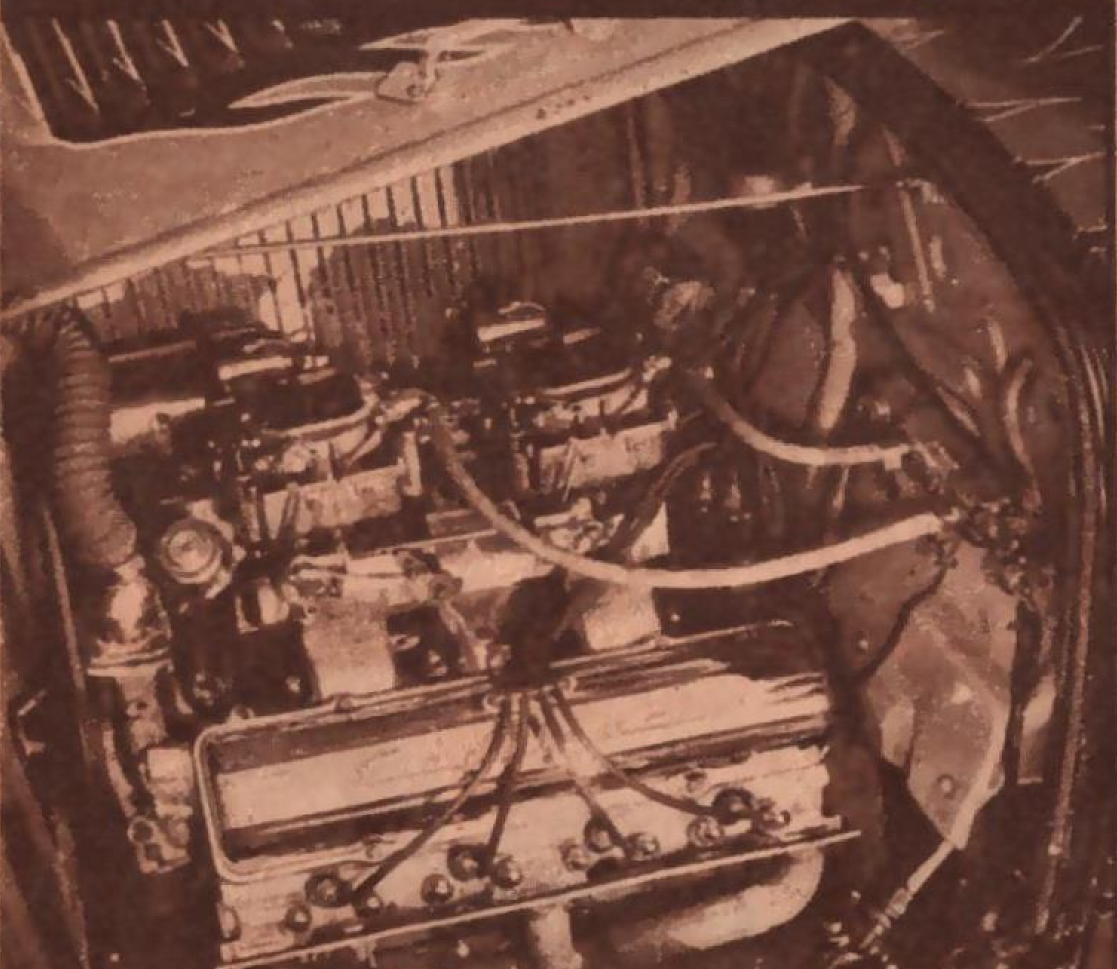
Lakes plugs on this car come by their title naturally; it turned 133.82 at El Mirage back in '51 when gasoline was hot stuff!

MODEL: *'32 Ford*
OWNER: *Eddie Bosio*







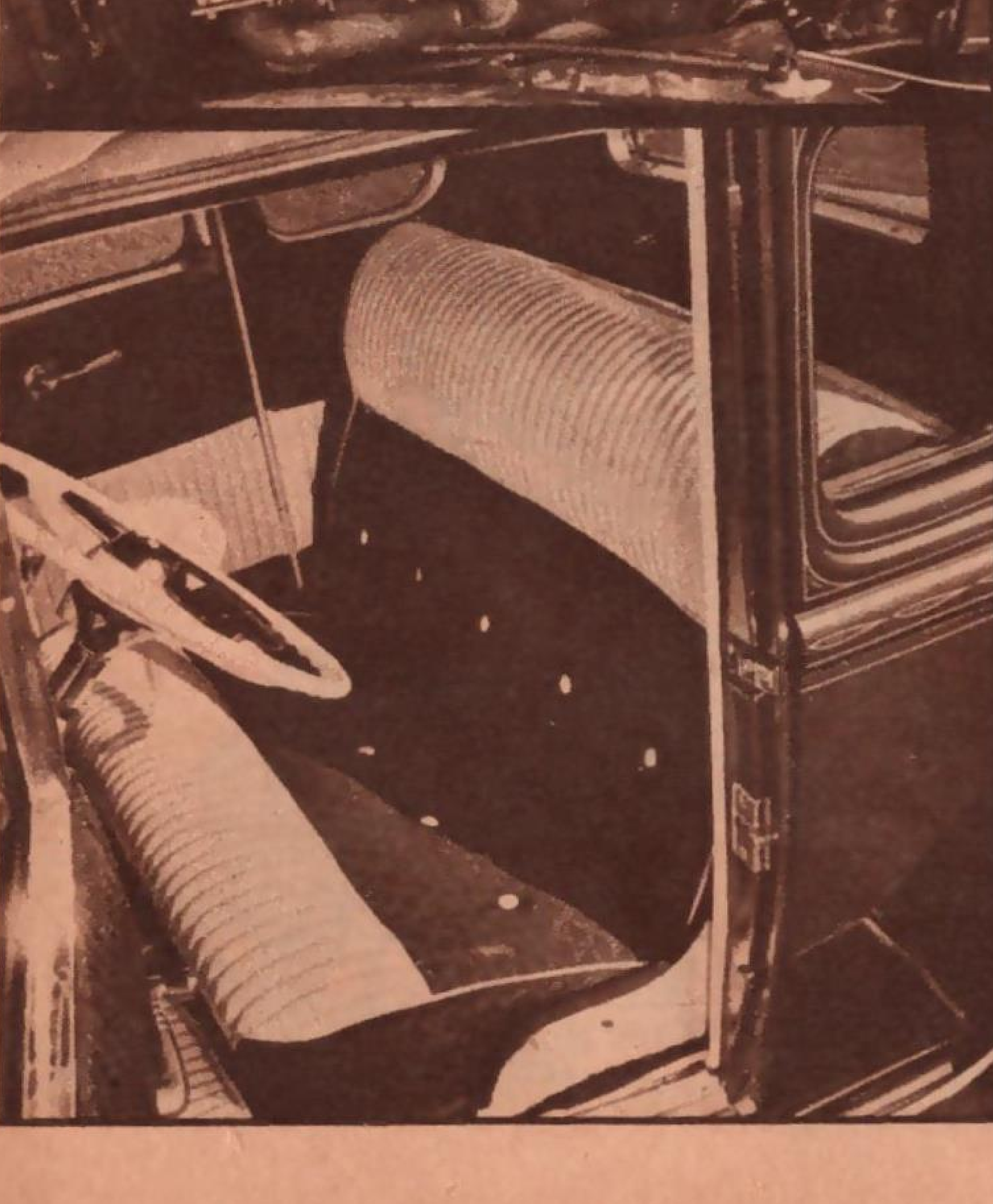


Pleated top-insert in Stein's coupe sends show spectators into spasms of envy. Additional flames lick across the top corners.

Healthy 4x4 Cad overhead was built by Sein, proved its worth by winning Central Pacific Coast NHRA Regional at 113 mph.

Interior by Tom's Top Shop in Alhambra, Calif., features silver-corded black frieze cloth with the pleated white naugahyde.

Jeffries' striping accents contours of rolled and louvered pan, special nerfing bar. Tried and true Pontiac blinkers are used.



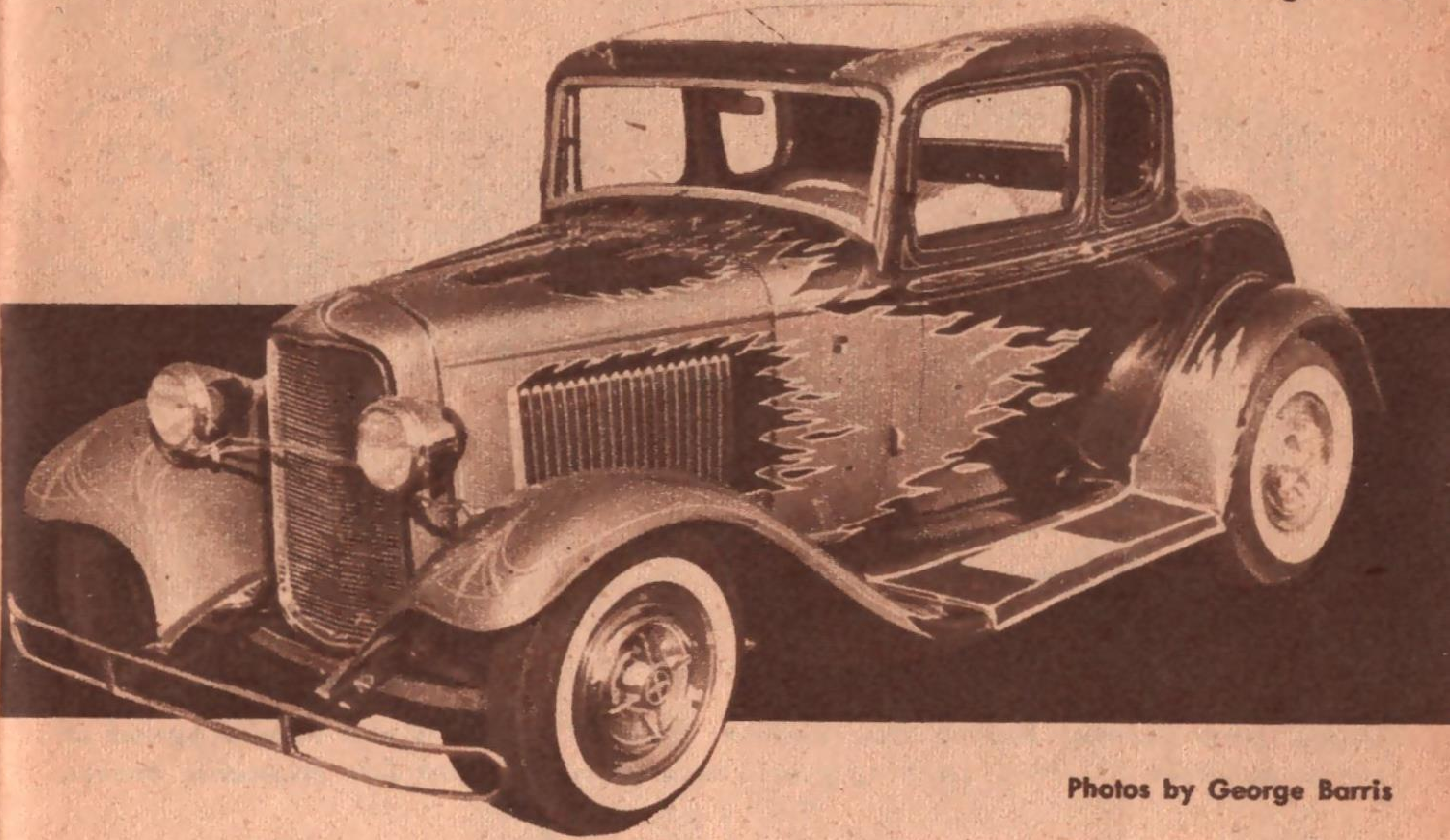
HLY 045
KUSTOMS
LOS ANGELES

MODEL: *'32 Ford*

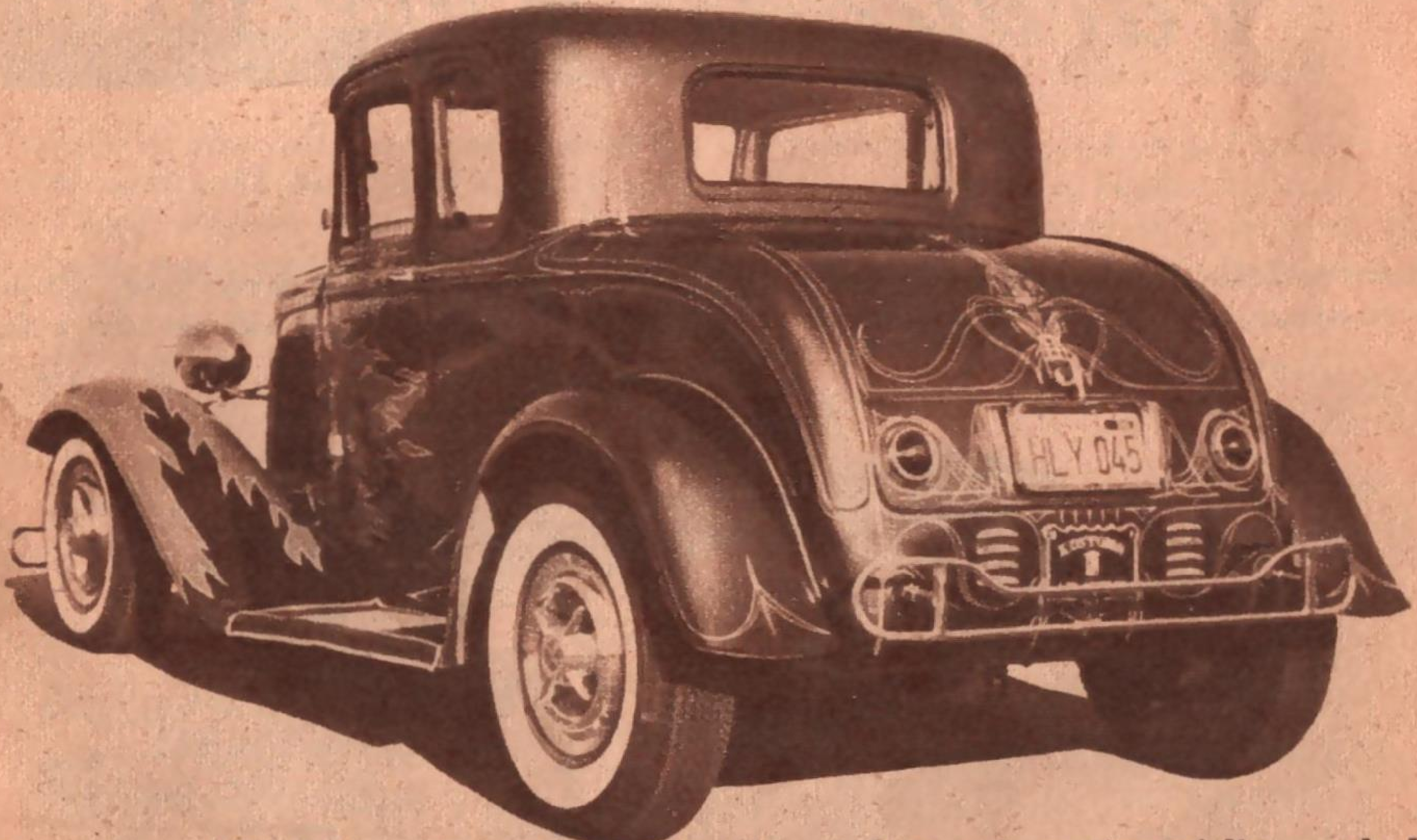
OWNER: *George Sein*

COVER CAR

Crazy running board pads are added at show time. Subtle grille consists of ½" round rod set into 1" deep strap steel socket, chrome plated. Flames are Lime Gold against Rustic Bronze Metallic background.



Photos by George Barris



Rear view of Sein's "scene" owes a lot to the subtle transformation of line made by bobbing the rear fenders 4". Lowering in the back was done with de-arched spring.

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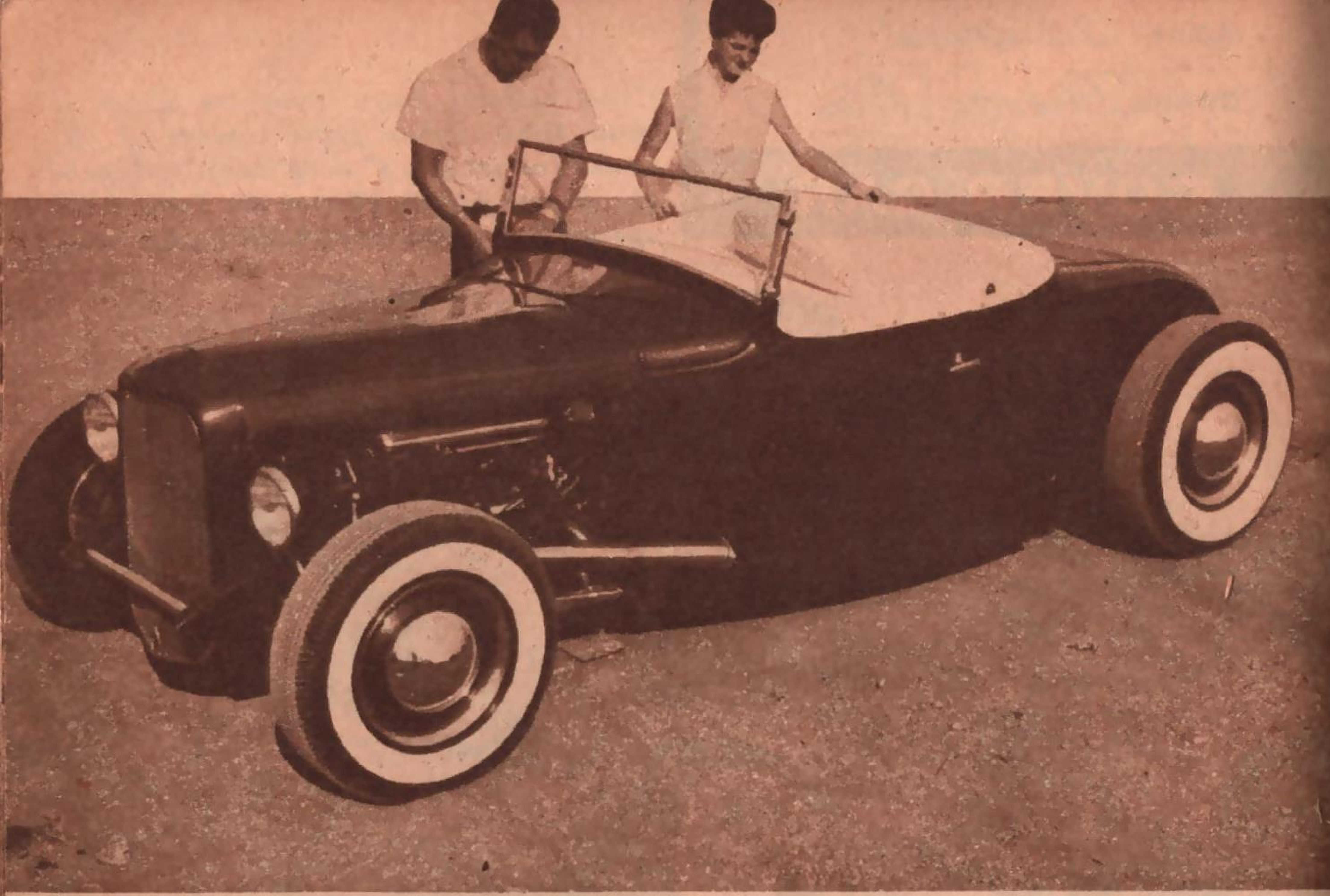
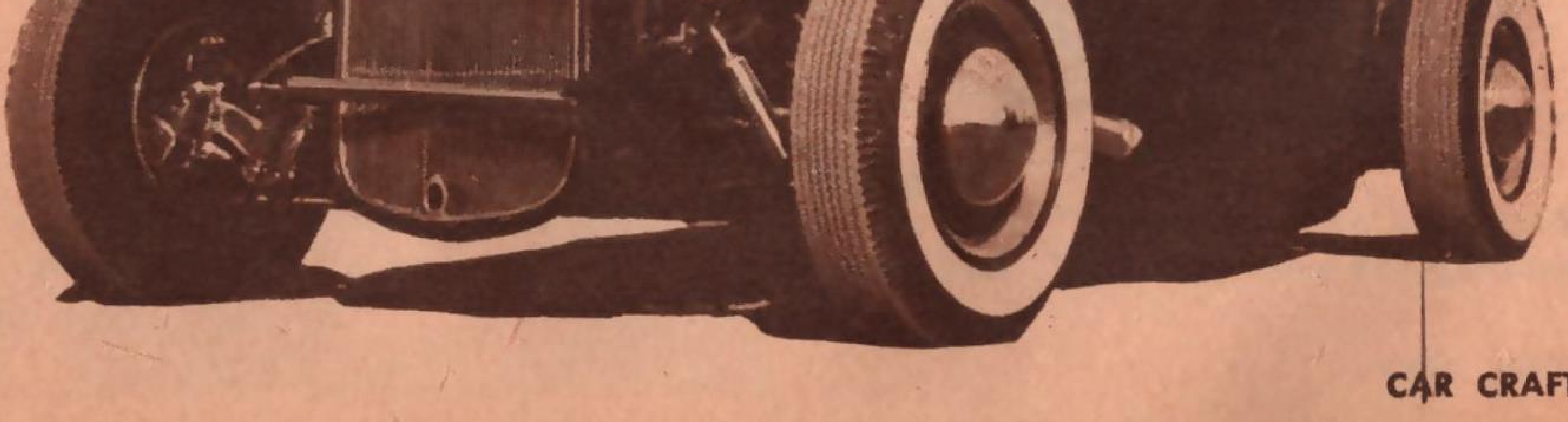


Hailing from Muncie, Kansas, Bob Sullivan built-up his street rod over a period of four years' time. '32 Ford running gear was modernized with late hydraulic brakes.

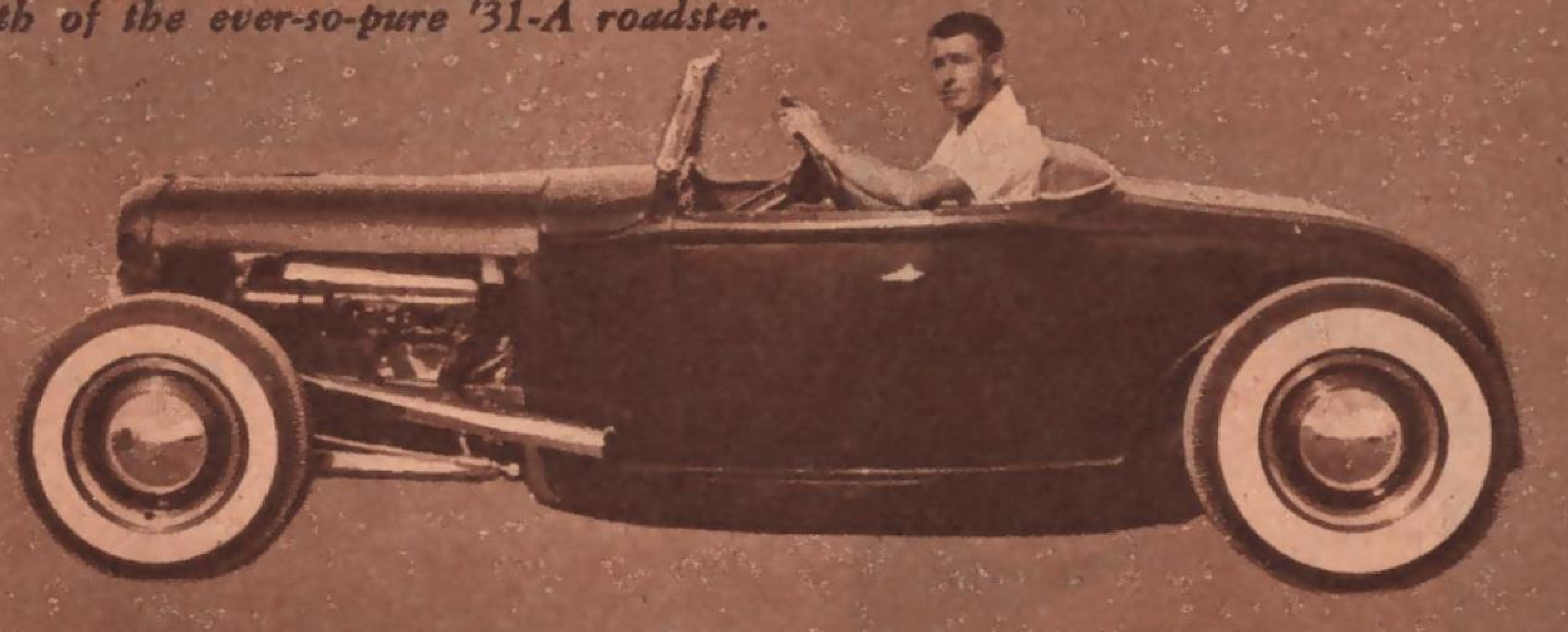
Cavalcade ROADSTER

continued

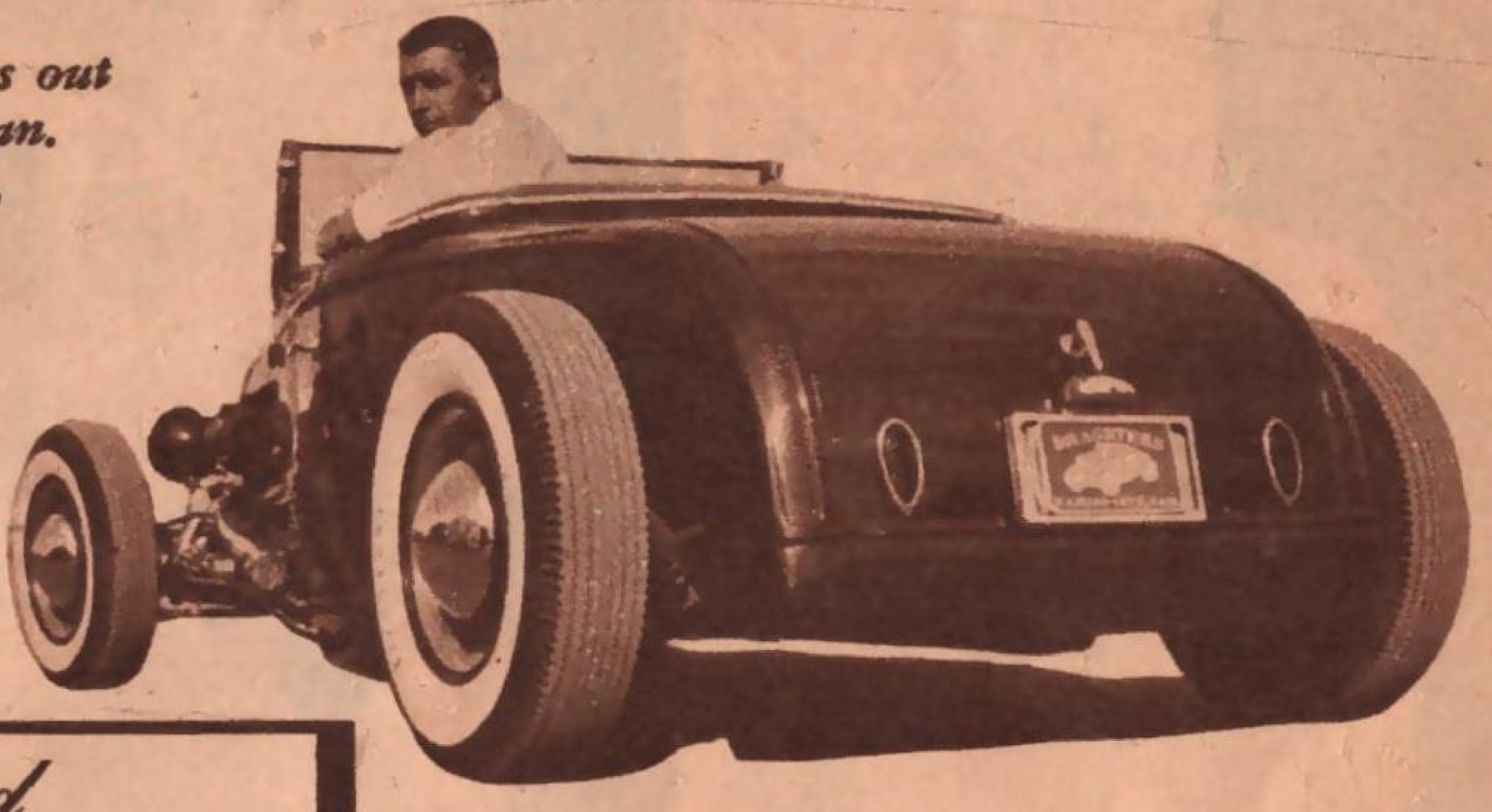
Deuce radiator and shell were moved forward to permit dropping between frame horns to compensate for the 6" channel job. Late Ford tubular shocks provide smooth ride.



Nice touch is the pan running along the lower body edge to simulate the original depth of the ever-so-pure '31-A roadster.



Rolled pan at rear carries out depth theme set by side pan. Rear-end ratio is 3.27:1, allowing use of low and second for drags with a good cruise high.

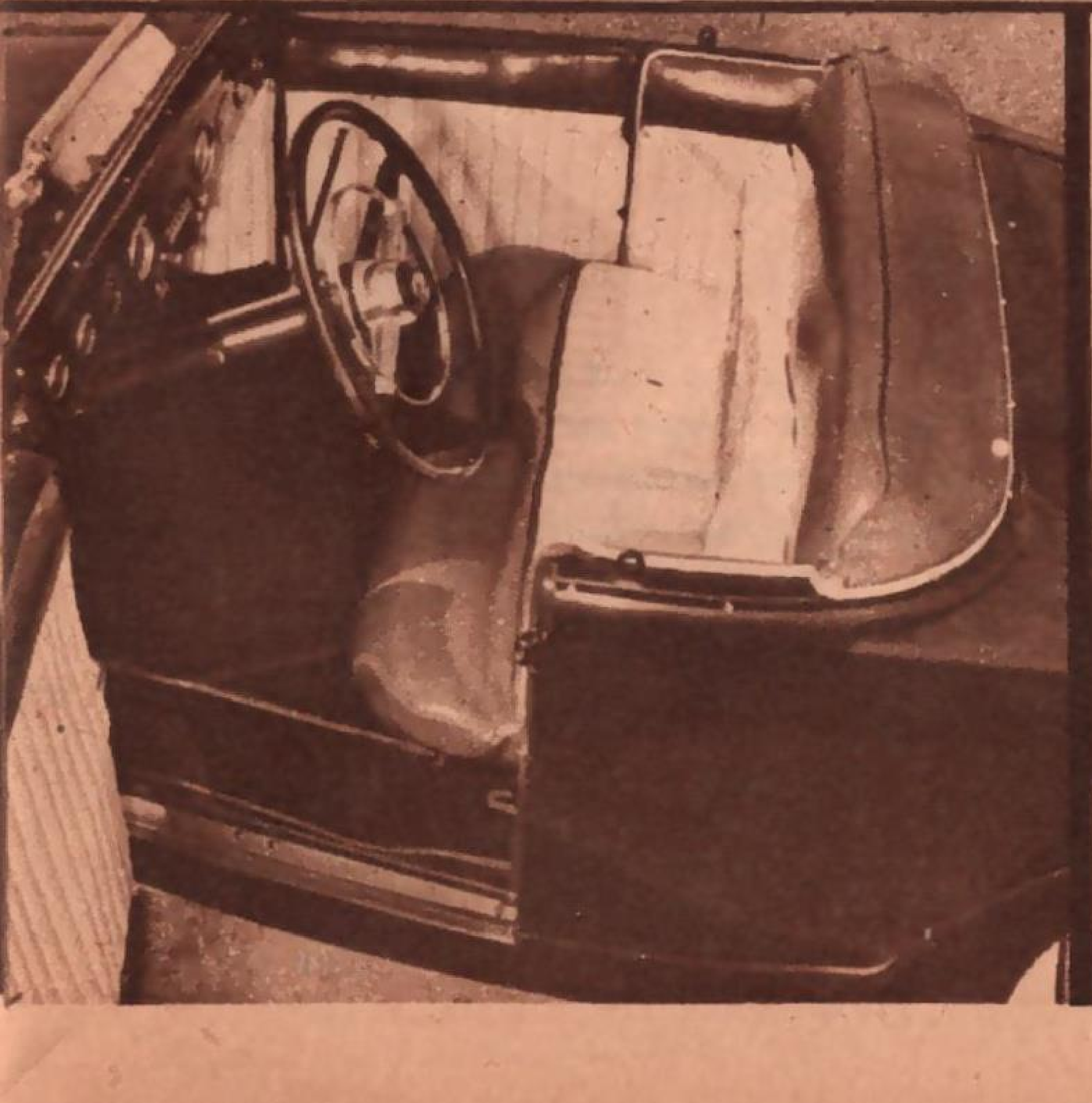


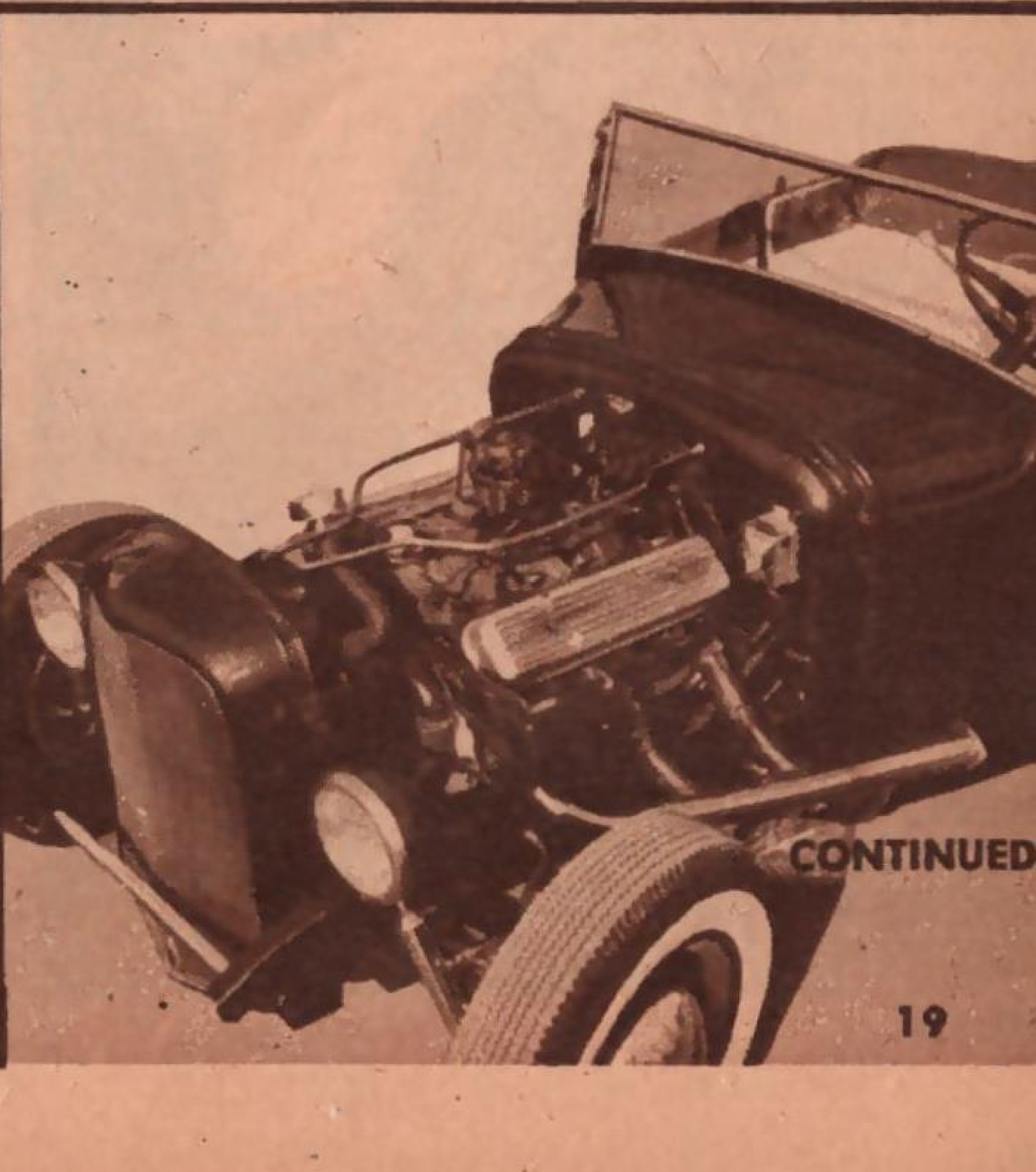
MODEL: *'31 Ford*

OWNER: *Bob Sullivan*

Interior of blue and white leather contrasts nicely with solid Baltic Blue color of body. '40 Ford column shift gear box is used.

'49 Olds remains stock except for big over-bore, dual ignition, header exhausts. Low speed punch is good with a stock cam.





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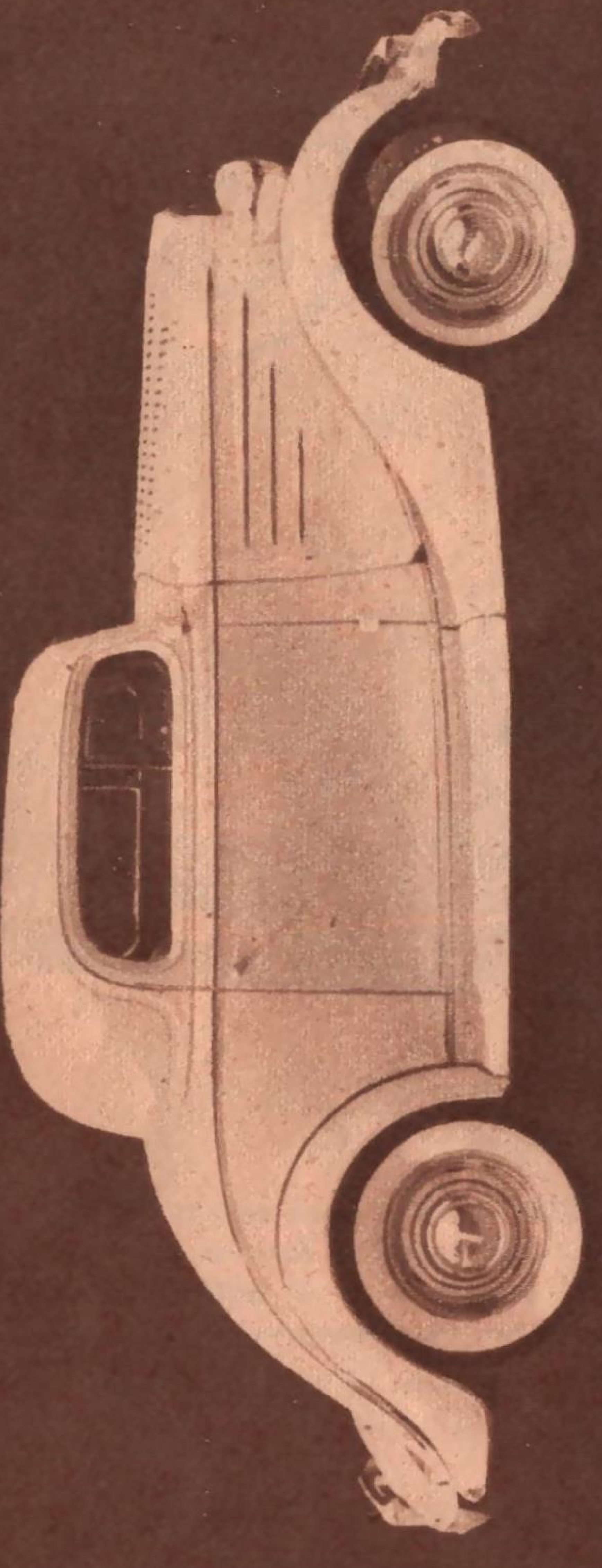
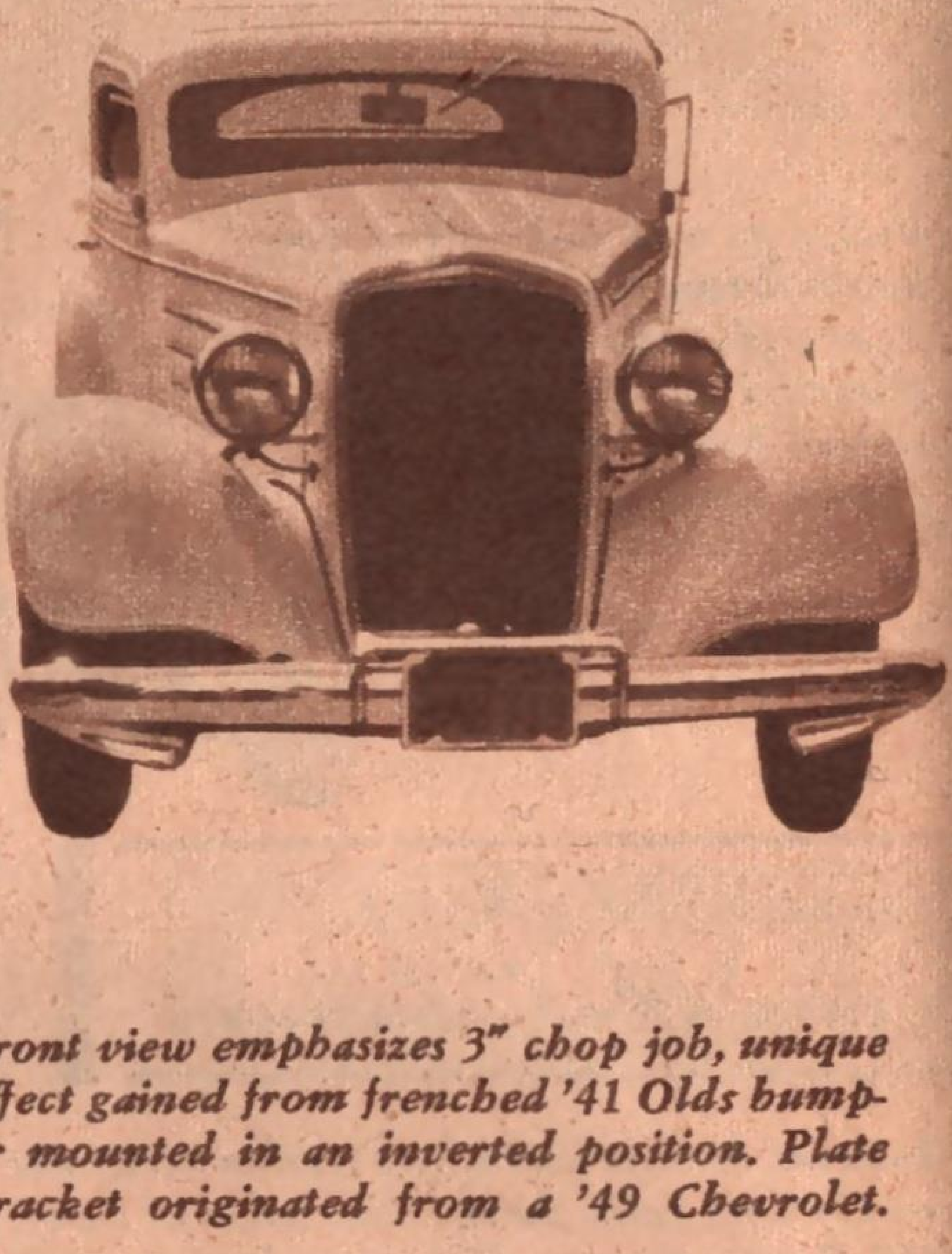


Unusual from the word go, the coupe required the talents of two Oakland, California, body shops to complete the modifications — "O.K." and Scottie's.

Photos by George Burnley



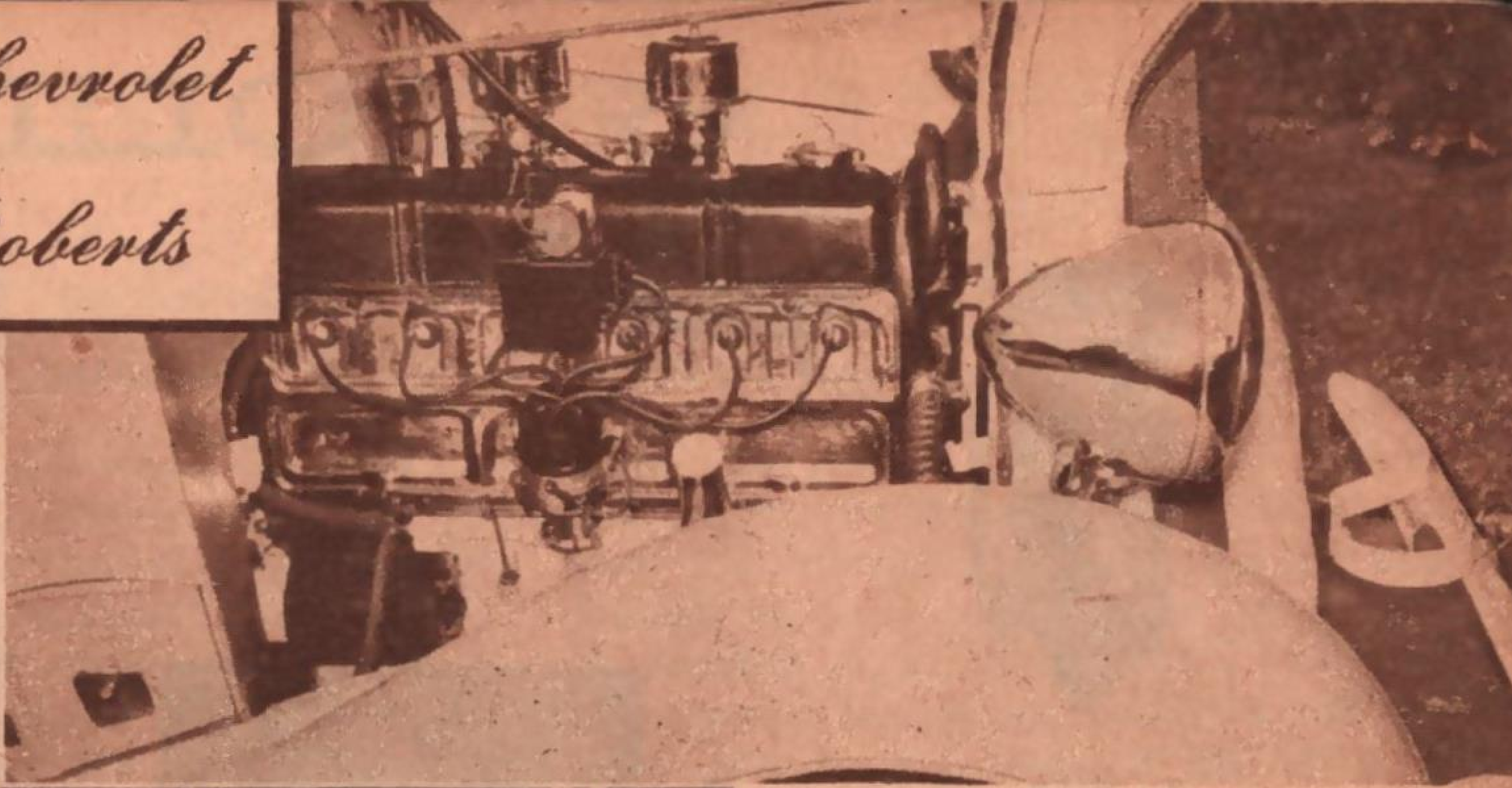
Front view emphasizes 3" chop job, unique effect gained from frenched '41 Olds bumper mounted in an inverted position. Plate bracket originated from a '49 Chevrolet.

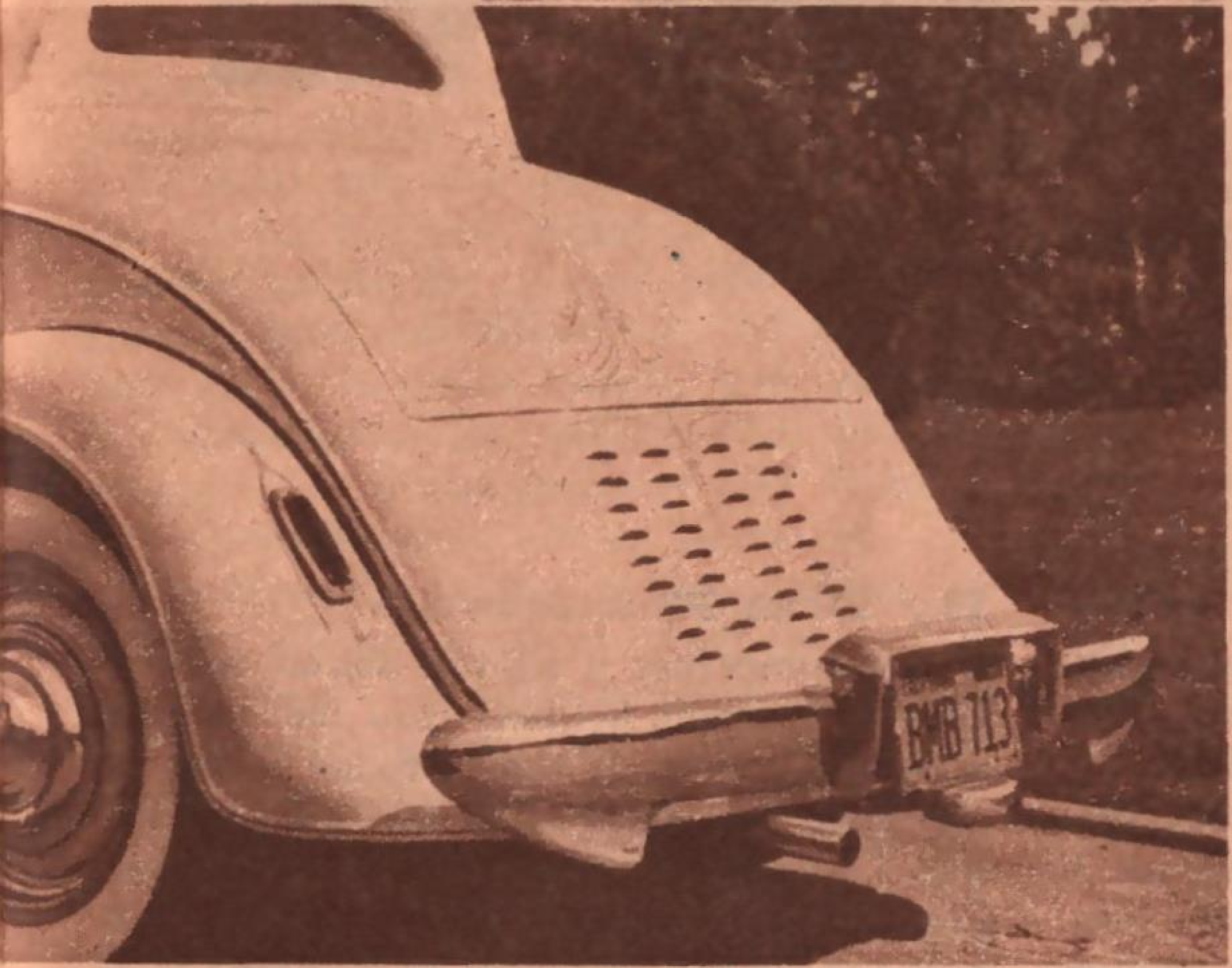
RIGHT • Sum total of changes wrought by Roberts gives coupe air of competition car with lights and bumpers added, rather than the dual-purpose vehicle that it really is.

MODEL: *'34 Chevrolet*

OWNER:

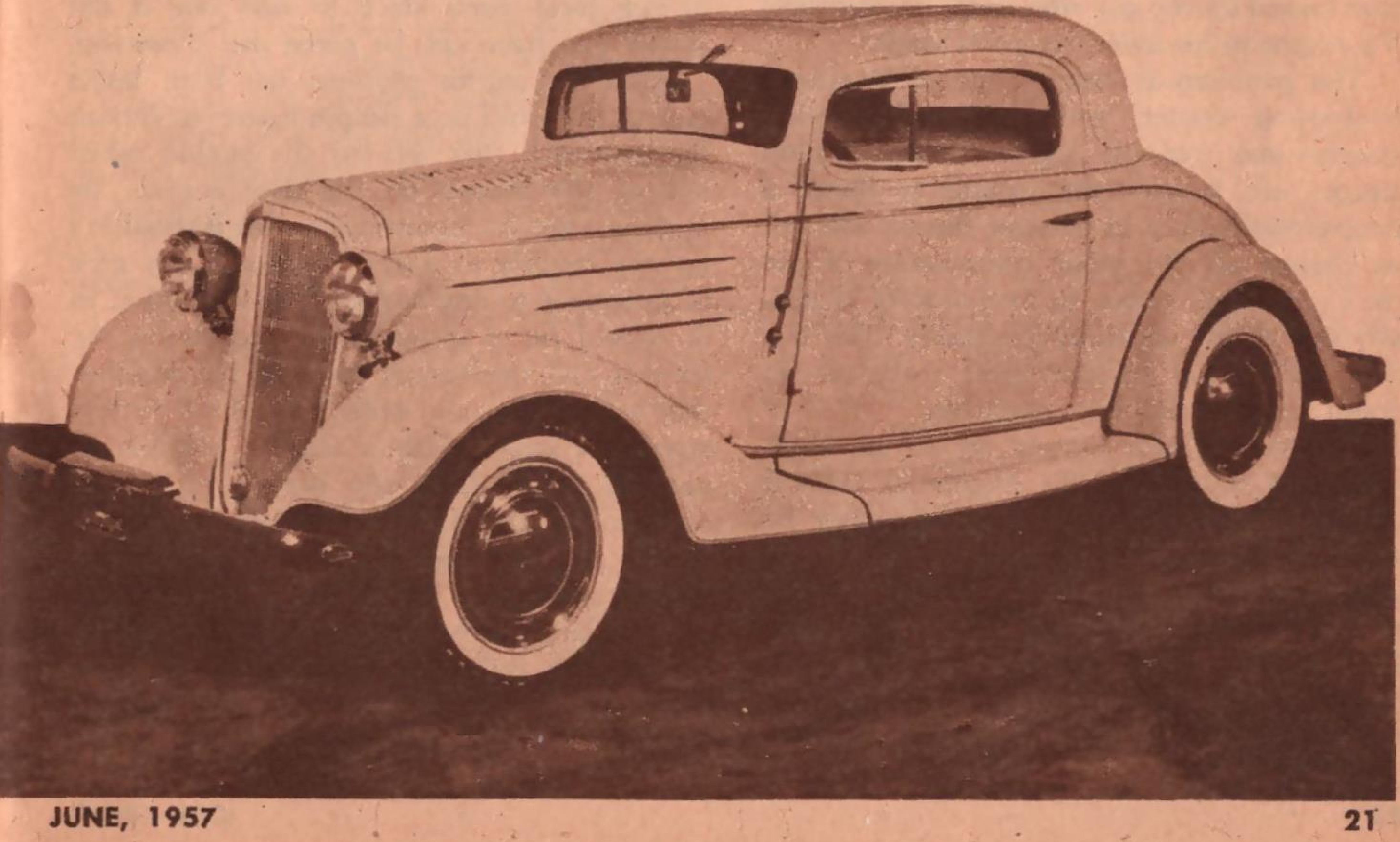
Robert Roberts



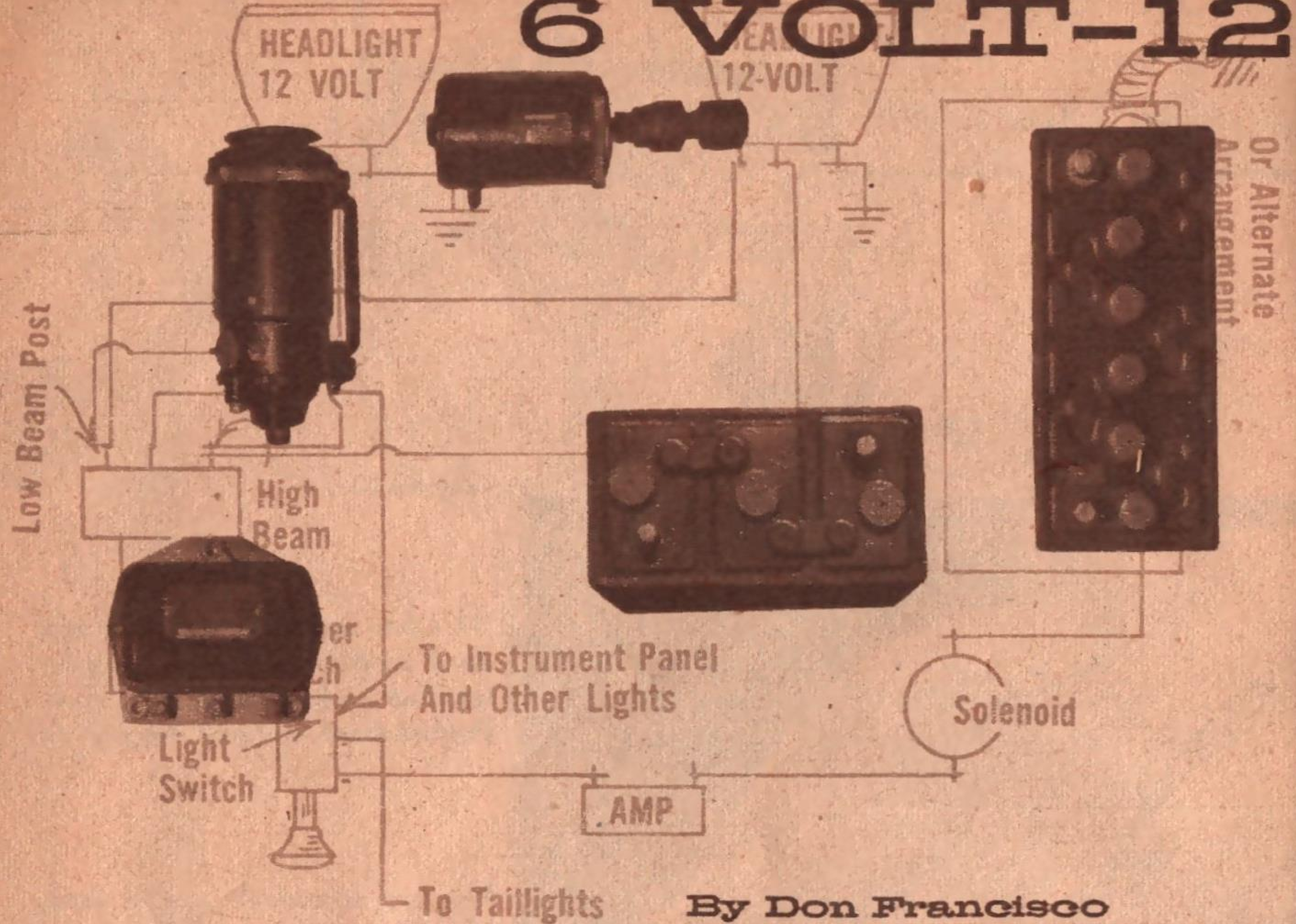


'51 Chev mill has big bore and dual carbs; Mallory Magspark ignition and Spalding 276° cam. Ported head features big valves.

Striping accents louvered deck, '41 Chev blinkers. Forty-five coats of San Pedro Blue enamel paint finish-off this unusual job.



6 VOLT—12



By Don Francisco

IT LOOKS LIKE the Detroit engineers slipped a wheel under the hot rodders when they adopted twelve-volt electrical systems for their late model automobiles. The only reason this move was made was to provide a hotter ignition system without going to a two-coil distributor, with more lively engine cranking as a secondary consideration, but it sure loused up the guy who drops a late model V8 engine in his older, six-volt chassis.

The problem is simply one of having a twelve-volt starter, generator, and ignition system and six-volt lights, radio, heater, gauges, etc. It isn't any trouble to install a twelve-volt battery in place of the six-volt but to change all the other components of the car's electrical system to twelve-volts is usually out of the question financially. The fact that this would be the ideal thing to do doesn't make it any less expensive.

The second best answer to the problem would be to convert the engine to six-volt operation. This would require changing its starter, generator, and ignition coil. It is possible to adapt earlier model six-volt starters to many twelve-volt engines but if this move is contemplated it is wise to explore the possibilities of the conversion before the engine is installed in the chassis. The reason for this is that sometimes a six-volt starter will require a different flywheel than the one that is on the engine. If this is found to be the case after the engine is in the chassis it will take a lot of extra work to make the conversion. A few twelve-volt starters can be converted to six-volt operation by changing some of their internal parts but it will take a trip to the local parts store to find out if the starter you have can be given this treatment.

After the starter problem has been taken care of it should be a simple matter to mount the generator that was on the engine taken out of the chassis on the new engine. By making a special mounting bracket it shouldn't be any trouble to adapt practically any type of generator to any engine. The first thing to do would be to compare the pulleys on the six-volt and twelve-volt units to see whether they are for the same width belt. If the pulleys aren't the same width it may be possible to use the pulley from the twelve-volt generator on the six-volt job or to buy one of the correct diameter and width that will fit the six-volt armature. The shafts in most makes of generators are fairly well standardized, making the pulleys sufficiently interchangeable for easy installation of one that will do the job. The diameter of the pulley can be

VOLT SOLUTION

How to Unscramble Mis-matched Engine and Chassis Electrical System Combinations

important, so try to maintain as nearly the same generator-to-crankshaft ratio with the new setup that there was on the engine for which the generator was made. When mounting the generator on the engine, be sure its pulley is in alignment with the crankshaft pulley. If the pulleys are out of alignment the belt will wear faster than it should and it may even climb off the pulleys when the engine is running.

By using the same generator that came in the car on the new engine it will also be possible to use the original generator regulator without any alterations. In fact, the car's entire electrical system, with possibly the exception of the starter switch and the wiring between the generator and its regulator, could be used without alterations.

Twelve-volt ignition coils installed as standard equipment on passenger cars cannot be used on six-volt current merely by leaving the twelve-volt resistor out of the circuit. The windings in these coils are designed for approximately eight volts and they will not put out the spark on six volts that a good six-volt coil will. No changes are necessary in a twelve-volt ignition distributor to use it on six volts but if a hotter spark than it will put out is needed it would be easy to install a special two-coil distributor and have the best.

Changing the ignition system to twelve volts didn't cure the bad features of stock ignition distributors. They still have the same floppy breaker plates and poor construction they always had and a great improvement can be made in the way any engine runs by the installation of a precision-constructed distributor that holds the same dwell angle all the time and fires the cylinders in the engine at accurately timed intervals.

Before we become too involved in this voltage problem, perhaps a short explanation of what goes on in an automobile's electrical system may make it easier to understand the principles involved in the problem and the reasons for the solutions recommended.

The rate of flow of electricity through a conductor, such as a length of wire or an accessory of any type, is measured in "amperes." The pressure of the flow, or the force that pushes the amperes through the conductor, is "voltage." Before current can flow through an electrical circuit the circuit must be complete, or, in other words, a path must be provided for the current from one terminal post of the battery to the other. A circuit includes the battery, its cables, switches, the accessory itself, and the wires that connect these components. As long as the circuit is complete from one battery post to the other, current will flow and there will be both amperage and voltage in the circuit. But when the circuit is broken, such as by opening a switch or disconnecting one of the wires or cables, current will cease to flow in the circuit. There will be voltage in the circuit but no amperage — there will be pressure but no flow.

IGNITION CIRCUIT

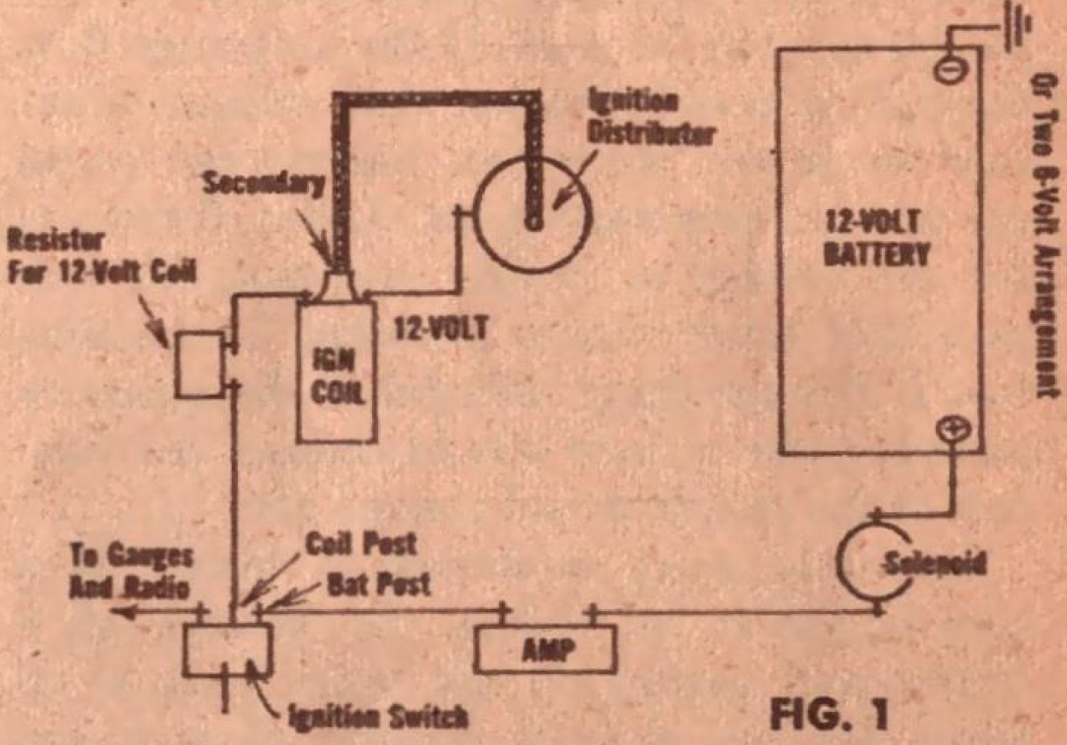


FIG. 1

The amount of electricity required to operate an electrical accessory is determined by the number of "watts" the accessory consumes in a second of time. This is the accessory's "power" rating. To compute the number of watts, multiply the voltage in the circuit by the number of amperes flowing through it. For instance, if a six-volt radio requires ten amperes for its operation, the power rating of the radio is sixty watts. An equivalent radio designed to operate on twelve volts would require only five amperes, which would give it, too, a power rating of sixty

CONTINUED

watts, although the amperage flow through the twelve-volt radio would be only half that through the six-volt type. Because of this lower ampere requirement of twelve-volt devices, the twelve-volt batteries made for automobiles have only half, or possibly a little more than half to handle the ever-increasing electrical loads of modern automobiles, of the ampere-hour rating of six-volt batteries. However, a twelve-volt battery is capable of as much work as a six-volt because it can deliver only half as many amperes in a given time, it can push them with twice the force.

The method of reducing the voltage in a circuit for accessories that require a lower voltage than the battery delivers is by inserting a "resistor" in the circuit between the battery and the accessory. Resistors are made in different types, the most popular for automotive use being of the wire-wound variety, such as those used with many ignition coils. A wire-wound resistor consists of a coil of special wire that has high resistance to electrical flow wound on an insulator of some type. There is a terminal post at each end of the coil that enables the resistor to be inserted in the circuit.

Resistors are made in many capacities for different applications and it is important that the correct one be used. If the amperage flow through a resistor varies, the voltage delivered by it will vary also, the voltage going up as the amperage goes down; therefore, for the voltage to remain constant, the ampere flow must remain constant. This means that if the amperage demand of the accessory served by the resistor should change, the voltage in the circuit would change also.

It would seem as though it would be a simple matter to reduce the voltage of a twelve-volt battery to six volts with a resistor for the six-volt portion of a mixed twelve-six-volt electrical system but the problem isn't so simple if the components served by the resistor are to function properly. The reason for this is that the amperage flow through a car's electrical system varies with the number of lights and accessories that are in use at one time. If the system were served by a single resistor the voltage in the various circuits would rise and fall according to the amperage load on the system and the lights and accessories wouldn't operate properly.

It would be possible to use a resistor with each light bulb and each accessory in the car but this would involve many resistors of different capacities and quite an installation job, and there would be another disadvantage to such an arrangement that will be explained later. It is not possible to use resistors with fuel, oil pressure, or heat gauges because the amperage flow through the gauges and their sending units varies. The sending unit controls the flow of amperes through the indicating unit on the instrument panel and the indicating unit registers accordingly. The gauges would function if they were in series with a resistor but they would not give accurate indications.

GAUGE CIRCUIT 6-VOLT GAUGES, 12 VOLT BATTERY OR TWO 6-VOLT ARRANGEMENT

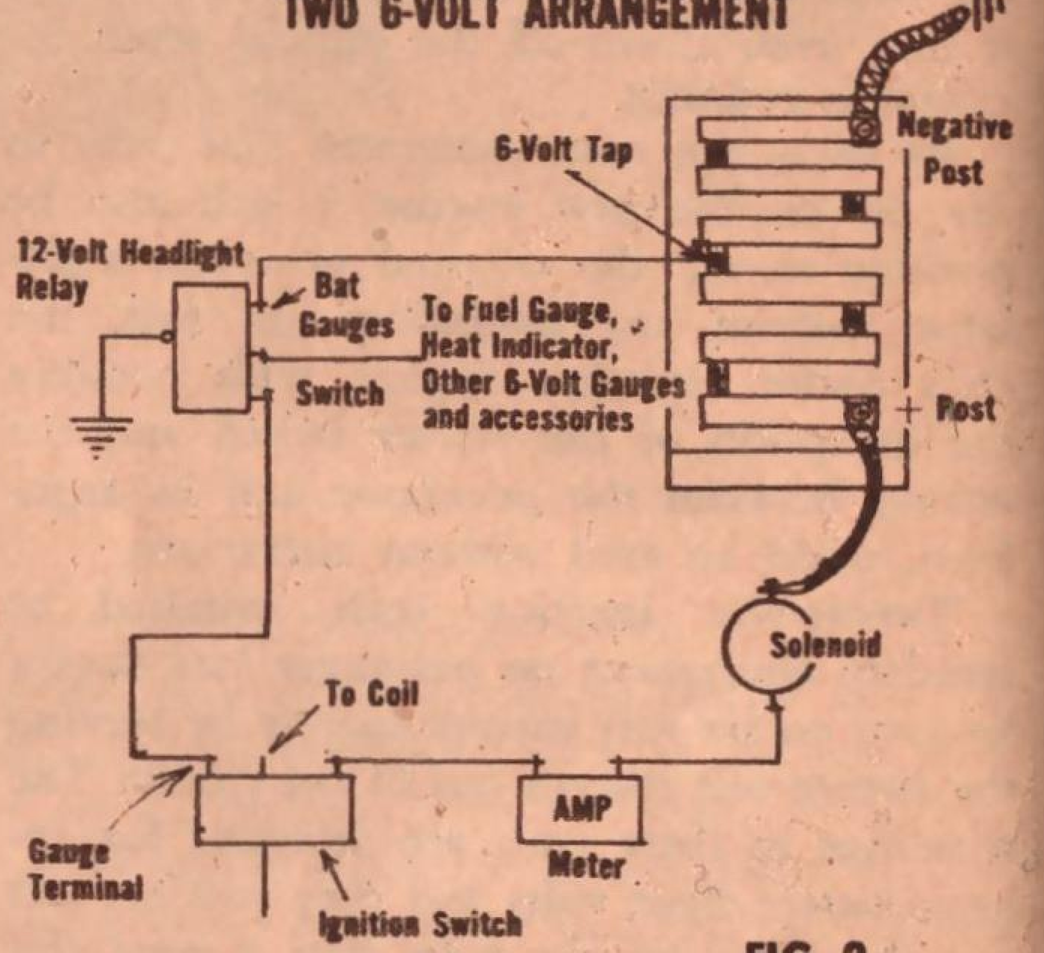


FIG. 2

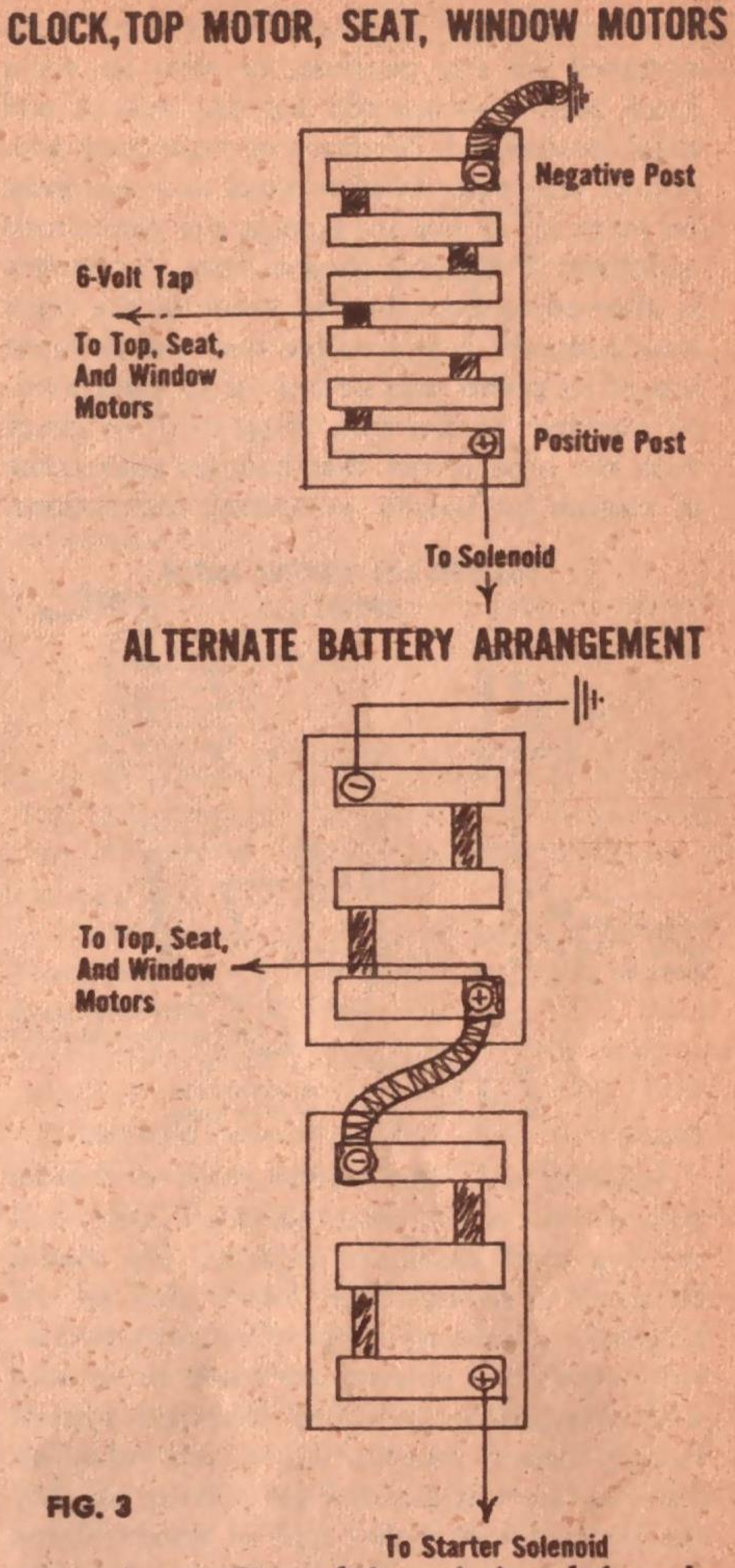
When an engine change of any type is made it is essential that the sending units that were used originally with the oil pressure and heat indicator gauges be installed in the new engine. Sending units and gauges are made to operate with each other and if different sending units are used with the gauges in the car the gauges won't indicate correctly and they may possibly be damaged. Installing the sending units from the old engine in the new engine shouldn't prove to be too difficult because most of the units have similar mounting means, making them easy to interchange.

An important disadvantage of using resistors to cut twelve-volt current to six-volts is that although the voltage of the current is cut by the resistor, the amperage demand of the accessory served by the resistor is not. In other words, if a radio required 10 amperes at six volts, it would still require 10 amperes if it received current from a twelve-volt battery and a resitsor. The power consumed by the resistor and radio would be ten times twelve, or 120 watts, instead of the normal 60 watts that would be consumed by an equivalent twelve-volt radio that would require only five amperes. Sixty of the 120 watts would be used by the radio and the other 60 would be dissipated by the resistor in the form of heat. This action would apply to any accessory or light bulb that was in series with a resistor with the result that the load on the twelve-volt battery would be twice what it normally would be if it were used with twelve-volt accessories. This extra load would be hard on the battery and generator and would shorten their life.

If it isn't feasible or possible to convert the engine to six-volt operation, either the chassis components must be converted to twelve-volts or a source of six-volt current must be provided for them. As stated before, it is usually too expensive to convert all the chassis components to twelve volts so the only alternative is to provide six volts for them; however, some of the chassis components can be converted to twelve volts without too much trouble.

The source of six-volt current for a mixed twelve-six-volt electrical system would have to be three of the six cells in a twelve-volt battery or a standard six-volt battery. An ideal solution to the problem would be two six-volt batteries connected in series. This arrangement would provide twelve volts for the twelve-volt portion of the system and one of the batteries could be used for the six-volt part. Using two six-volt batteries in this manner would double the ampere-hour capacity of the twelve-volt part of the system, and one battery would provide full six-volt capacity. The twelve-volt generator would handle both batteries without any trouble. (See Fig. 9).

Polarity of the elctrical system, as determined by the side of the battery that is grounded, is important. Before the mass changeover by the industry to twelve volts, automobile manufacturers use both positive and negative grounded systems but now they have all adopted the negative ground. Apparently the only reasons for the change were to eliminate the confusion that existed in the service field when both polarities were used and to simplify the manufacture of generator regulators. Therefore, when converting a car to twelve volts, the negative post of the battery must be connected to ground, regardless of the polarity of the original system, because the generator regulator and ignition coil for the new engine are designed for a negative ground system. Generator regulators must have a polarity the same as the battery, and although it is possible to buy regulators that will operate on either negative or positive polarity, it would be foolish to buy a new regulator, if you already had one for a negative ground, when it would be so simple to ground the negative side.


CLOCK, TOP MOTOR, SEAT, WINDOW MOTORS

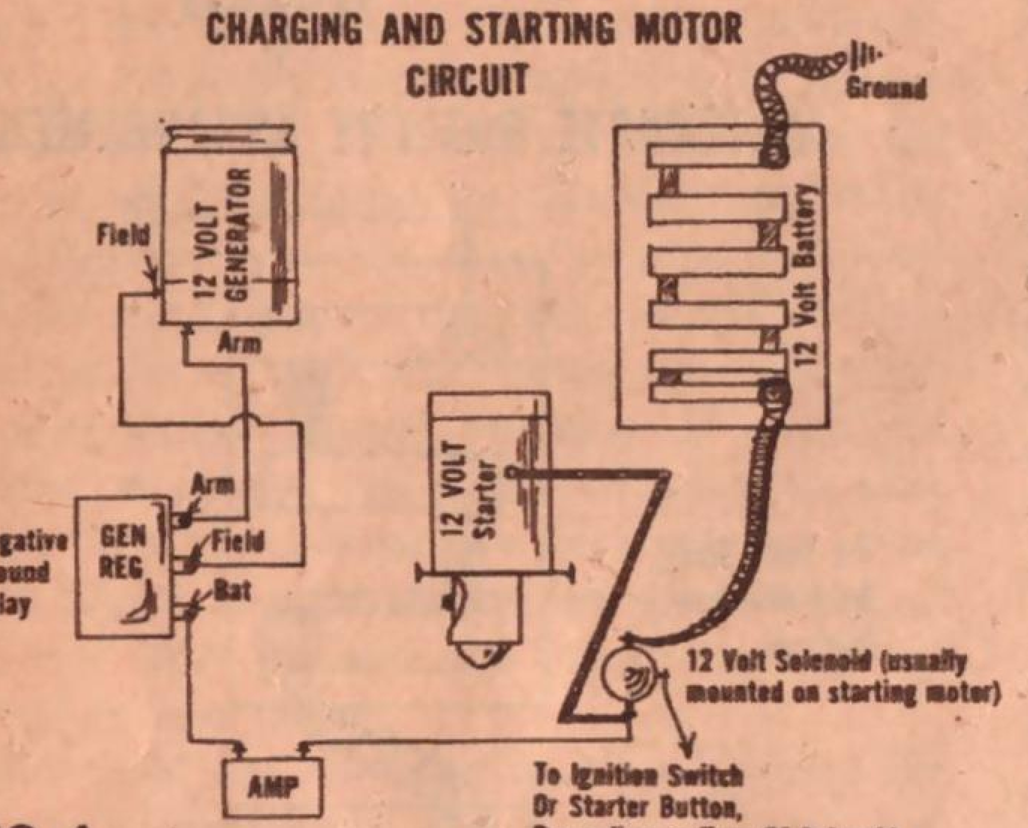
ALTERNATE BATTERY ARRANGEMENT

FIG. 3

Polarity doesn't make any difference to the generator as it will charge in any direction once it has been polarized by allowing current from the battery to flow through its field coils. This should be done whenever a generator has

CONTINUED

been installed on an engine after it has been removed for any purpose, or after its wires have been disconnected for any reason and then reconnected. Methods of polarizing generators vary with different types and care must be taken so as not to damage the generator's regulator. If the full current from the battery is allowed to flow through some of the regulator's circuits it is possible that one or more sets of its points will be burned or even welded together, so the wise thing to do is check with the local dealer that handles your make of engine for specific polarizing instructions.


CHARGING AND STARTING MOTOR CIRCUIT

Ground
12 VOLT GENERATOR
Field
Arm
12 Volt Battery
12 VOLT Starter
Arm
Negative Ground Relay
GEN REG
Field
Bat
12 Volt Solenoid (usually mounted on starting motor)
AMP
To Ignition Switch Or Starter Button, Depending on Type Of Solenoid

FIG. 4

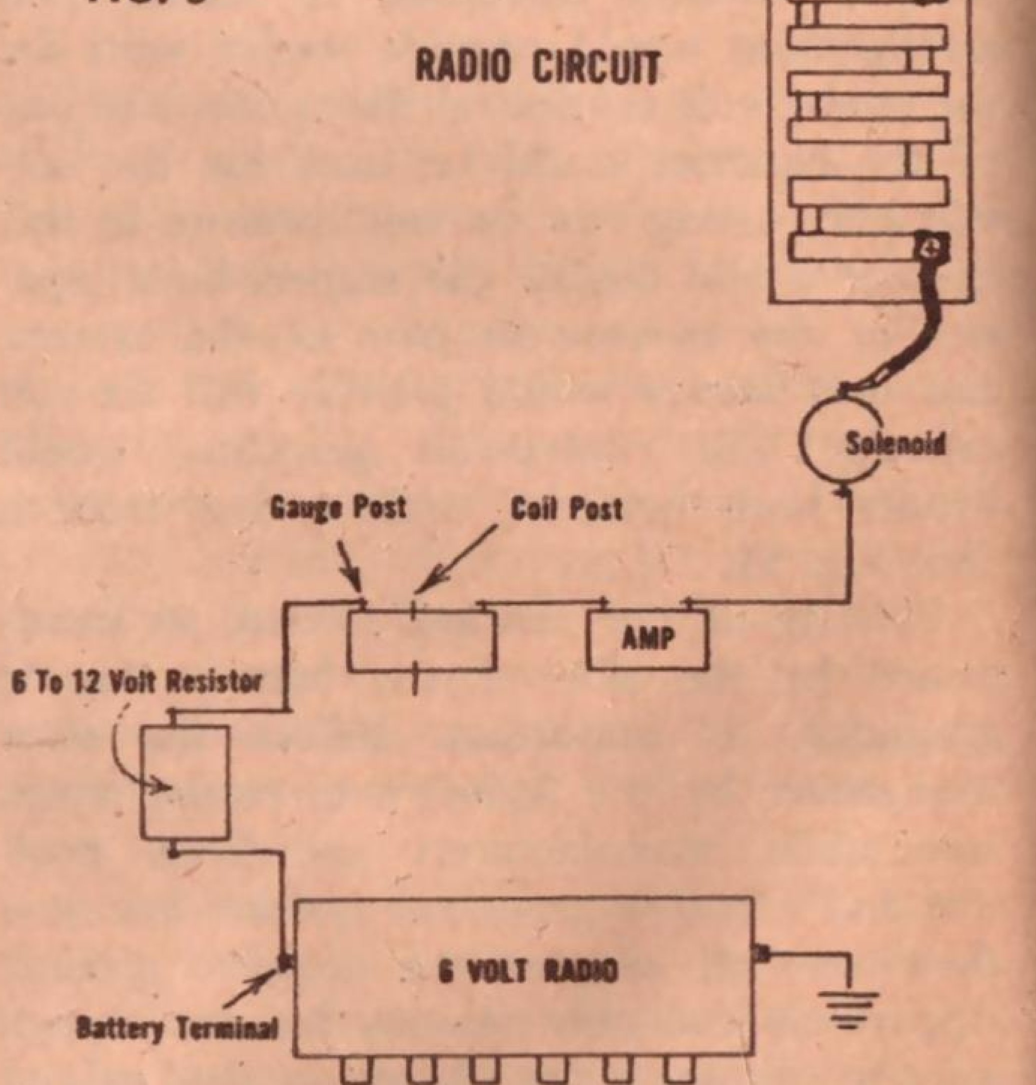
Ignition coils are wound with a definite polarity in mind, and although they will create a spark on either polarity, they should be wired correctly. This means that all the original equipment coils now in use on twelve-volt automobile engines are made to be used with a negative grounded electrical system. Radios, heater motors, lights, and other accessories are not affected by polarity so they can be used with either type of system. Some types of electric fuel pumps have a definite polarity so if you have one and it isn't a negative grounded type it will be necessary to exchange it for one that is.

If a standard twelve-volt battery is to be used in the car it will be necessary to fit it with a six-volt "tap" for the source of six-volt current. A tap is merely a means of connecting a cable to one of the battery's cell straps so current of the desired voltage can be taken from the battery. It isn't difficult to install a six-volt tap in a twelve-volt battery, the main thing to watch being that the tap is in the correct cell strap. The correct strap for six-volts is easily determined because twelve-volt batteries have five cell straps and the tap must be in the third strap from either of the cells that have a terminal post. This is the strap that separates the third and fourth cells, counting from either of the cells that have terminal posts. (See Fig. 3).

To install a tap, carefully drill through the correct cell strap with a ¼-inch drill, taking care not to drill through the top of the cell, and then thread the hole with a 5/16-inch USS tap. Make a stud about an inch and a quarter long from a 5/16-inch copper bolt and screw one of its ends into the strap. Lock the stud in the strap with a flat washer and a nut run down snugly against the strap. Don't tighten the nut too tight because it might pull the stud out of the strap. All six-volt circuits in the car's electrical system will originate at this tap; however, the six-volt capacity will not be too great because of the low ampere-hour capacity of the battery.

If two six-volt batteries are to be used as the source of current, the positive post of the battery that is connected to ground must be connected to the negative post of the second battery with a suitable cable. This cable must be of the insulated type, such as is used between a battery and the starter soleniod, but it must have the correct terminals on its ends to fit the posts on the batteries. The conductor in the cable must be as large as the conductor in the main cable between the battery and the starter solenoid because it will carry the same loads. The cable from the positive post of the second battery is connected to the battery post of the starter solenoid. This

FIG. 5


RADIO CIRCUIT

makes all the circuits in the system twelve-volt circuits but those that are to be operated on six-volts will be disconnected from the original system and connected to the correct source of current. Current for the six-volt part of the system can be taken from either end of the cable connecting the two batteries. The terminal on the end of the six-volt lead could be placed between the cable clamp nut and the clamp. Battery cables for twelve-volt systems do not have to be as large as those for six-volt systems because they do not carry as much amperage but the same cables and wire in the car that were used with the original six-volt system can be used for twelve volts with equal efficiency.

ALTERNATE BATTERY ARRANGEMENT

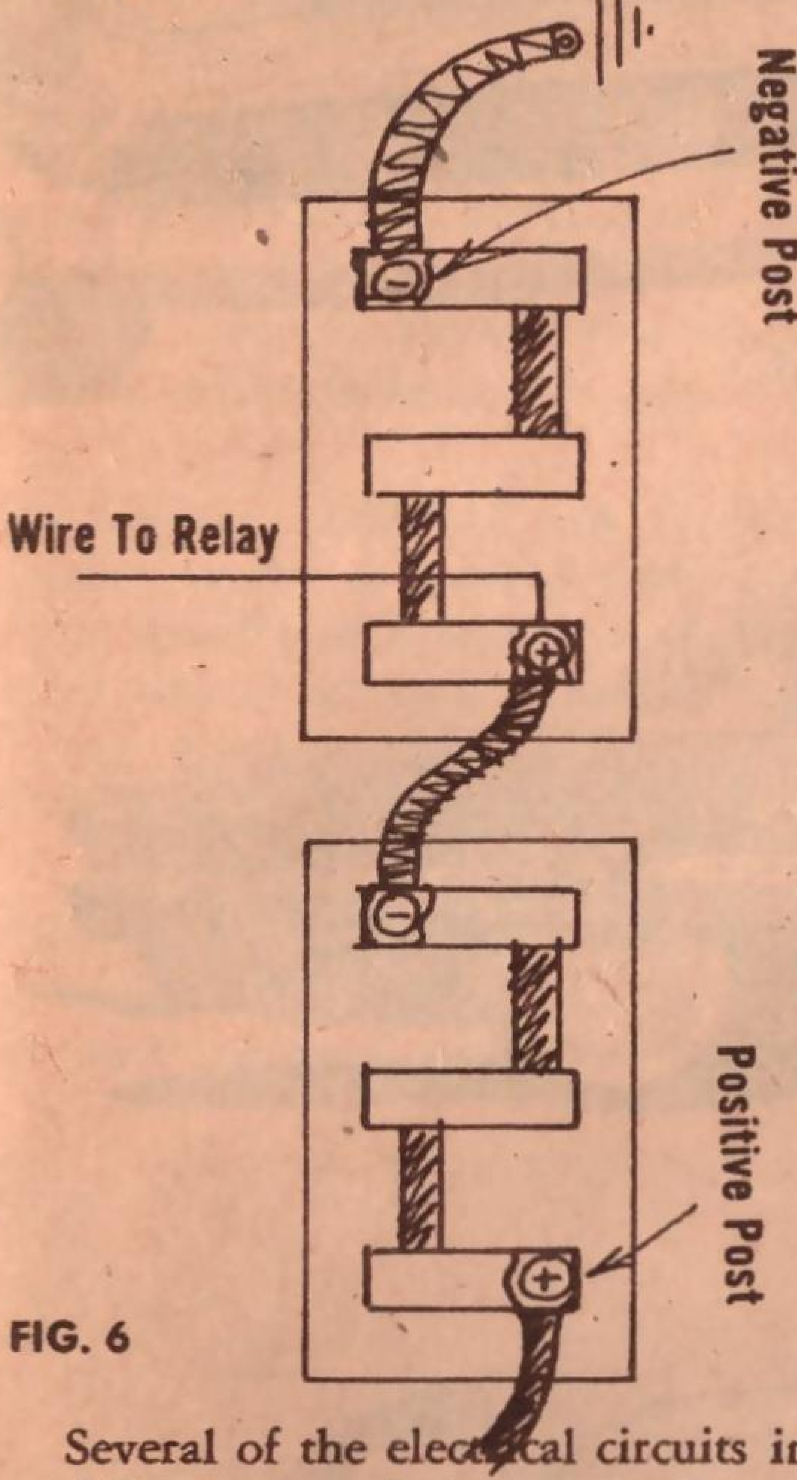


FIG. 6

Several of the electrical circuits in an automobile receive their current from the "Accessory" post of the ignition switch. This is done so that current will flow to these circuits only when the ignition switch is in its "On" position. In a mixed twelve-six volt system the ignition switch will be part of the twelve-volt portion of the system so some arrangement will have to be made to accommodate the accessory circuits that must be controlled by the switch. This can be done by using a relay controlled by the ignition switch to complete the circuit between the source of six-volt current and the necessary accessories. The relay would be actuated by twelve-volt current but it would conduct a six-volt current. (See Fig. 6).

TWO-COIL IGNITION CIRCUIT

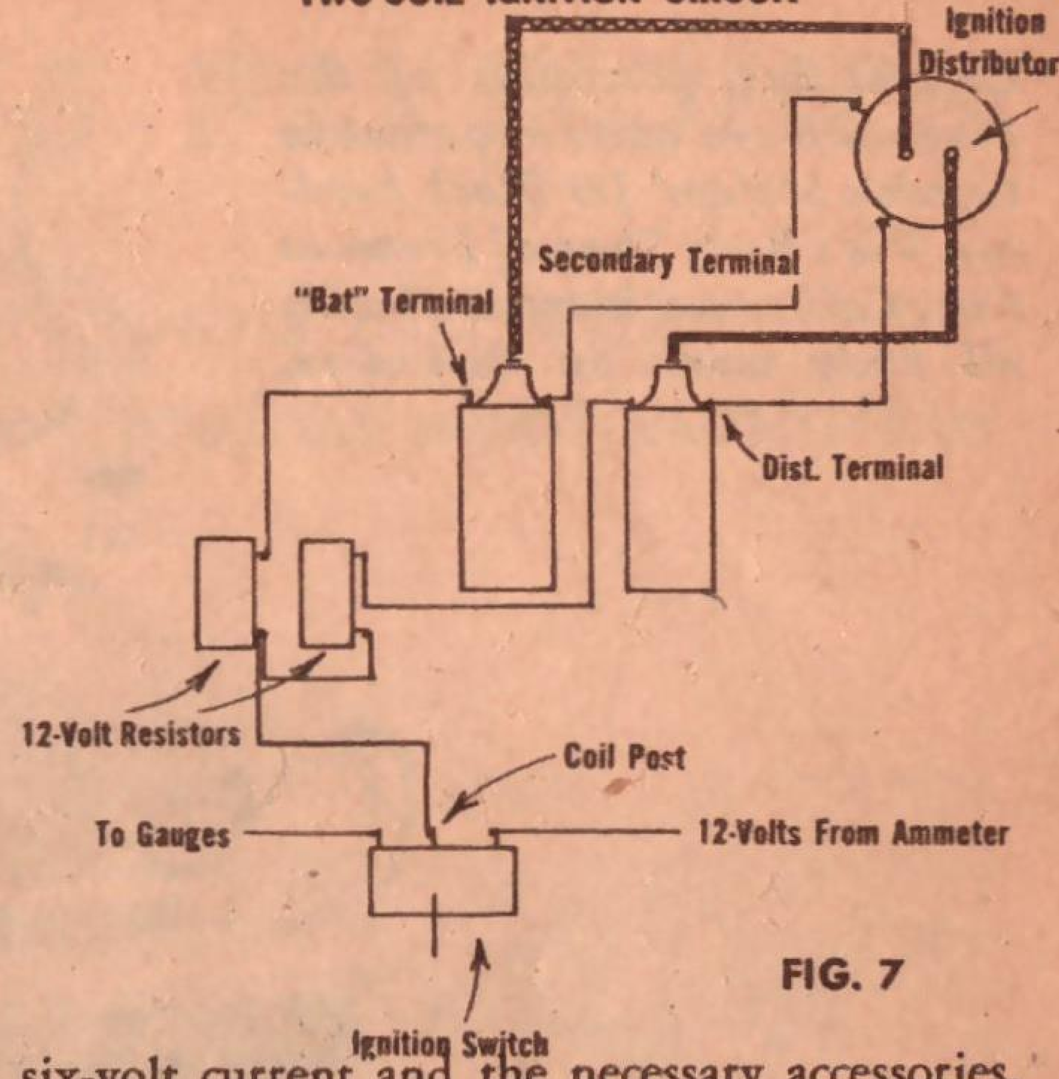


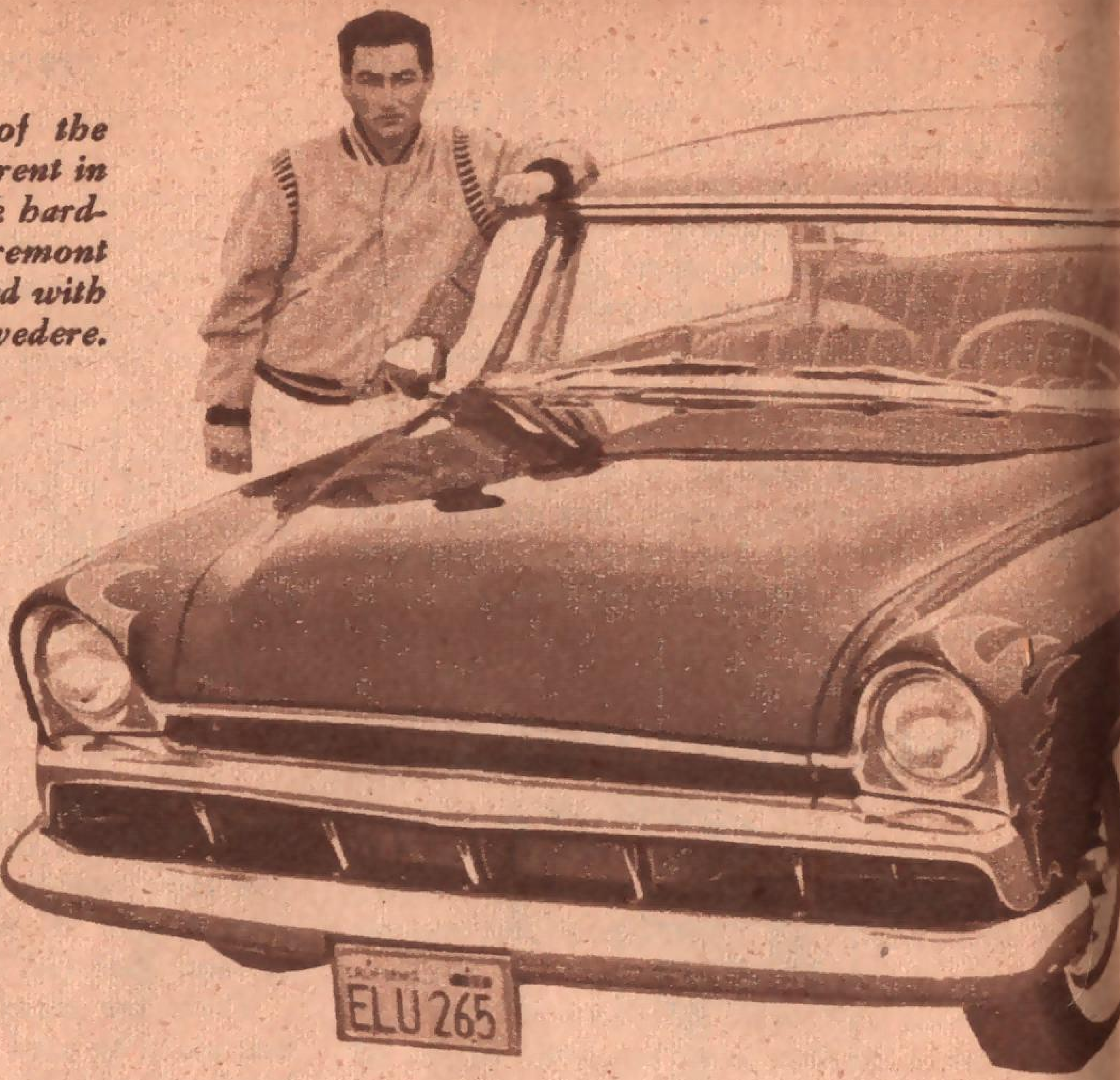
FIG. 7

There are many types of relays available that could be used for such a purpose, including headlight and universal types. The relay should preferably be made for twelve-volt current but a six-volt type could be used without any trouble. A relay of this type has two circuits through it, one to complete the other.

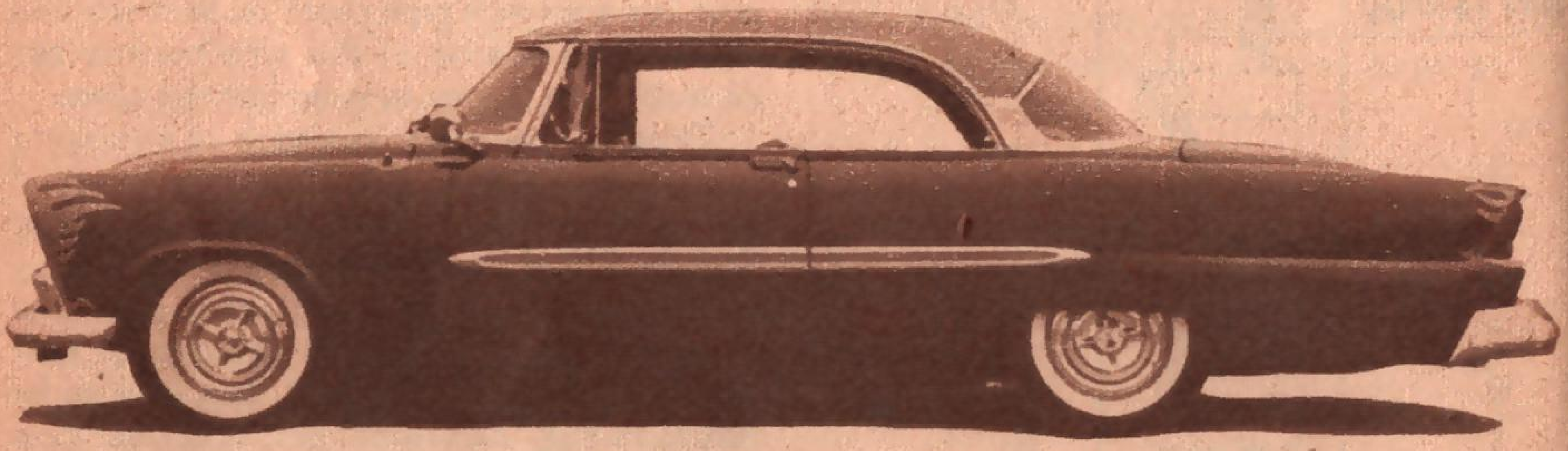
To install the relay, mount it in a position where the wires on the "Accessory" post of the ignition switch will reach its "Load" post. This particular post will be marked in various manners, depending on the make of relay, but the directions with the relay will explain how it is to be wired. A wire will then have to be run from the "Accessory" post of the ignition switch to the "Switch" post on the relay, and then, unless the actuating winding in the relay is grounded through the relay case, a "Ground" post on the relay will have to be grounded to the dash or some other metal part of the car with another short length of wire. Six-volt current for the relay must come from the six-volt tap on a twelve-volt battery or from one end of the cable that connects two six-volt batteries. This wire must be of at least 10 gauge because of the load it will carry and it must be connected to the "Battery" terminal of the relay.

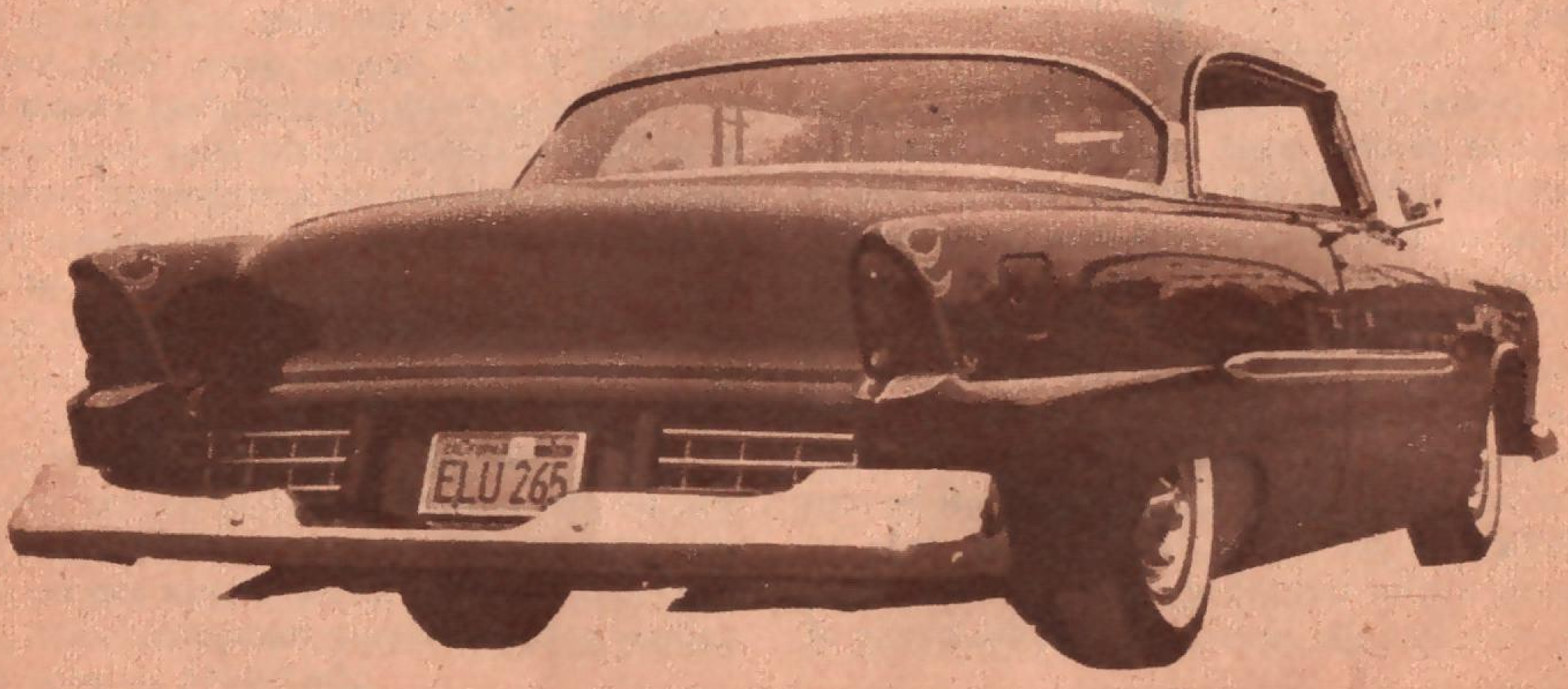
Now we have the necessary sources of current for the various circuits in the car's electrical system, the only thing left to do is connect the circuits to the correct source, according to the following recommendations.

CONTINUED on page 60


CALIFORNIA
ELU 265

Customizing potentials of the Plymouth are quite apparent in Gordon Stefans' Jet Black hardtop. Vic's Body Shop of Fremont City, California, is credited with all body work on Belvedere.

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ELU 265

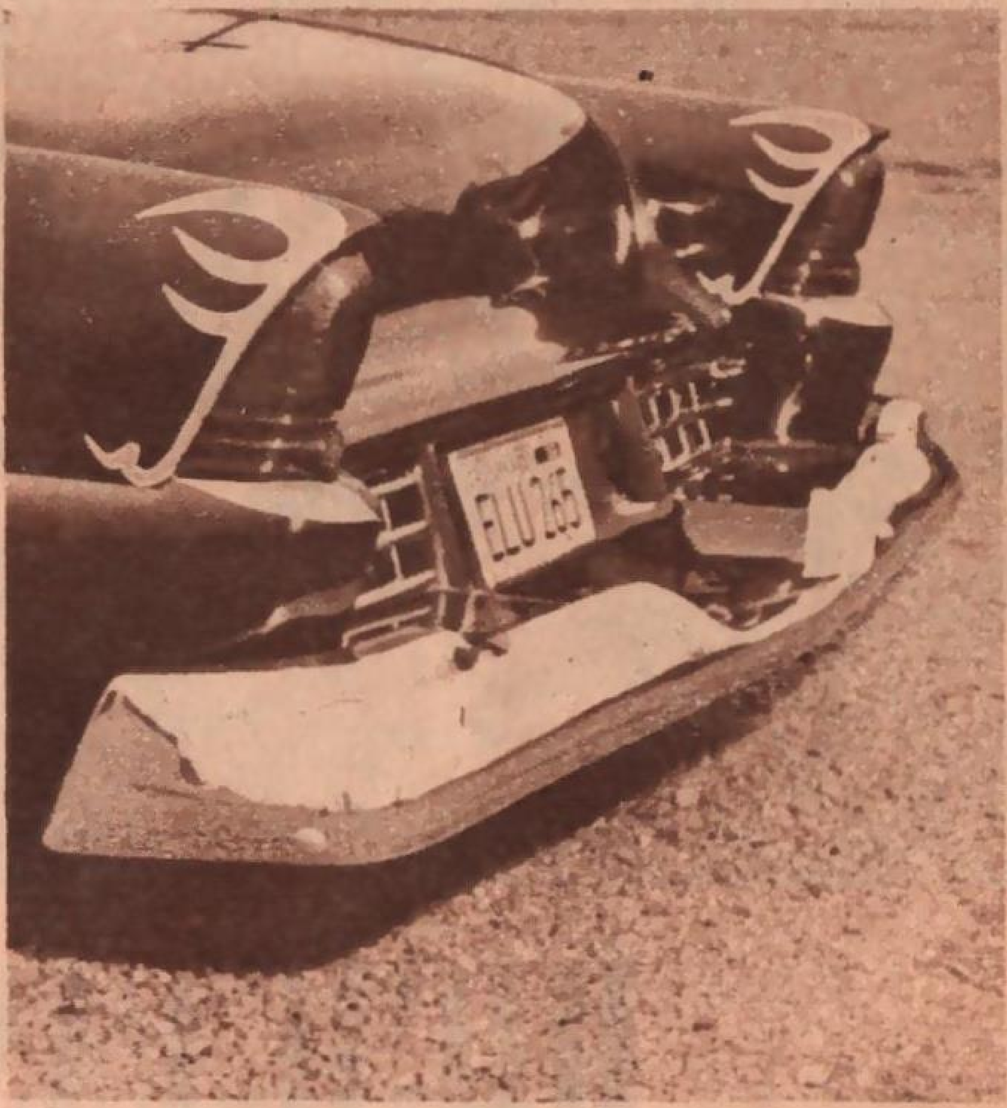
PEERLESS PLYMOUTH

'55 Belvedere hard top with custom touch makes neat runabout

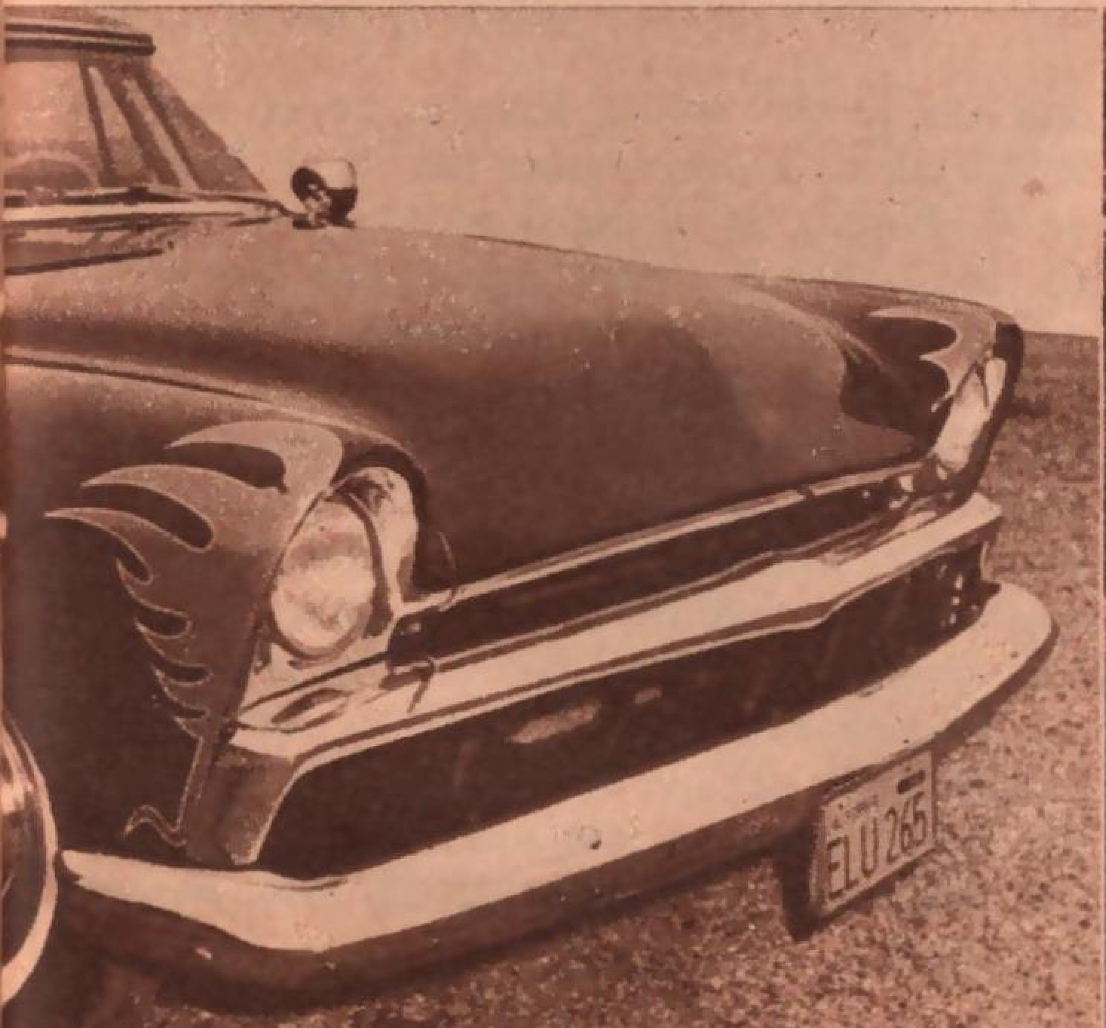
Running width of grille cavity is special made sheet-metal horizontal bar. Note small vertical bars positioned in lower section of cavity. Hood trim and bumper guards have been given the "deep six."

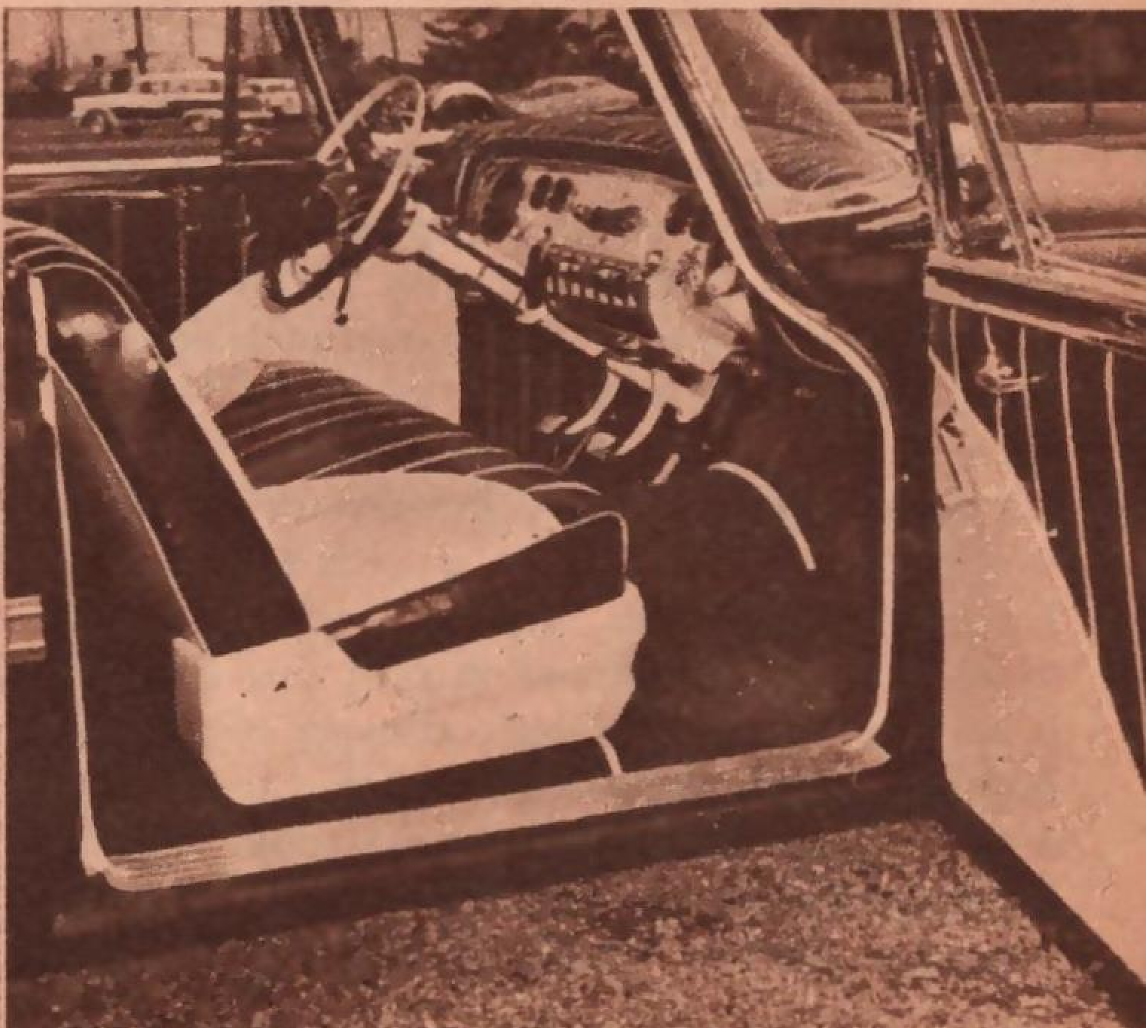
'56 Lincoln taillights and Plymouth rear fenders make a natural restyling combo. After trunk was decked, small grille pieces were added at rear, lending neat effect. Flame tipped fenders, painted Peacock Blue, add to the very special appearance.

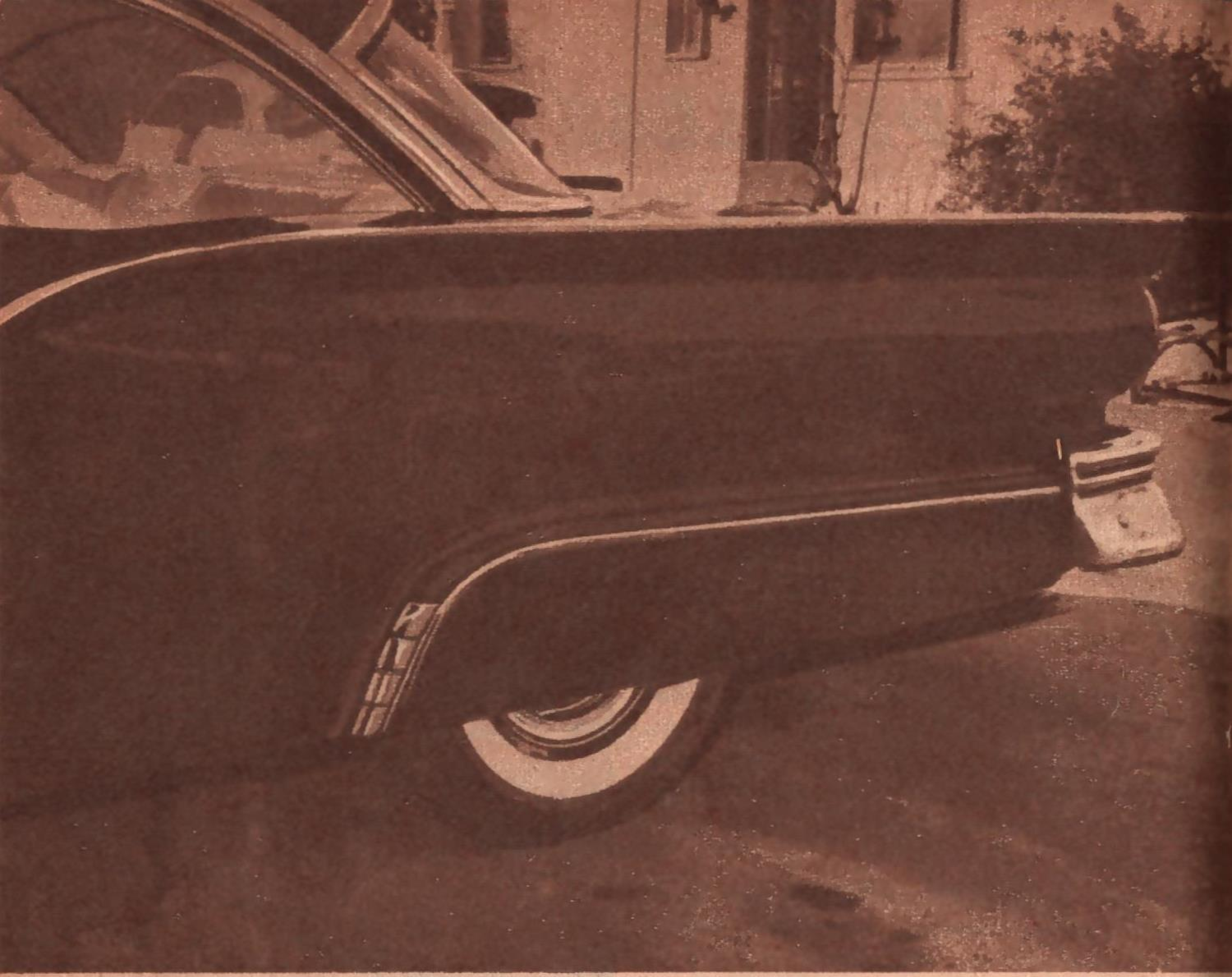
Clever flame painting and striping is work of owner. The stock side trim was discarded and replaced with the '56 Chev trim.



Fremont Upholstery Shop did wild black and white interior. Car has been lowered some five full inches both fore and aft.





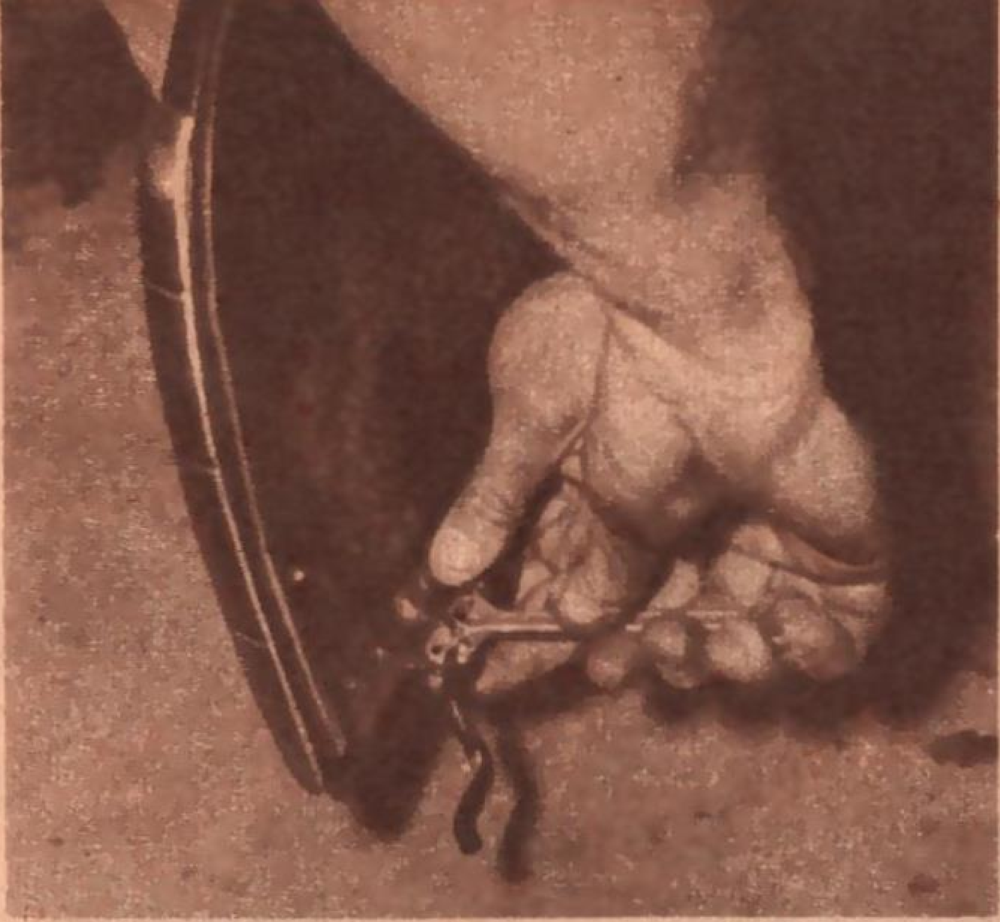


HIGH-FASHION SKIRTS

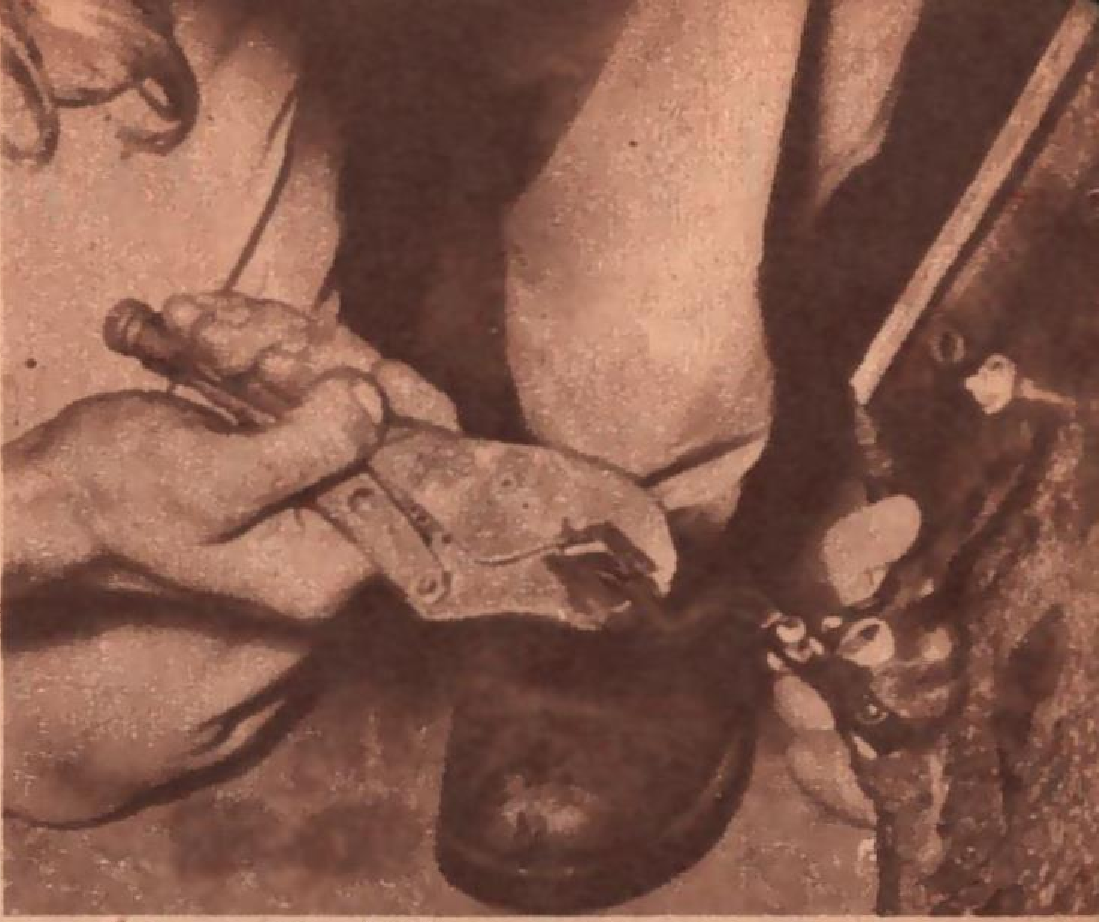
'57 Mercury Rear Fender Covers—To The Rescue!

photos by George Barris

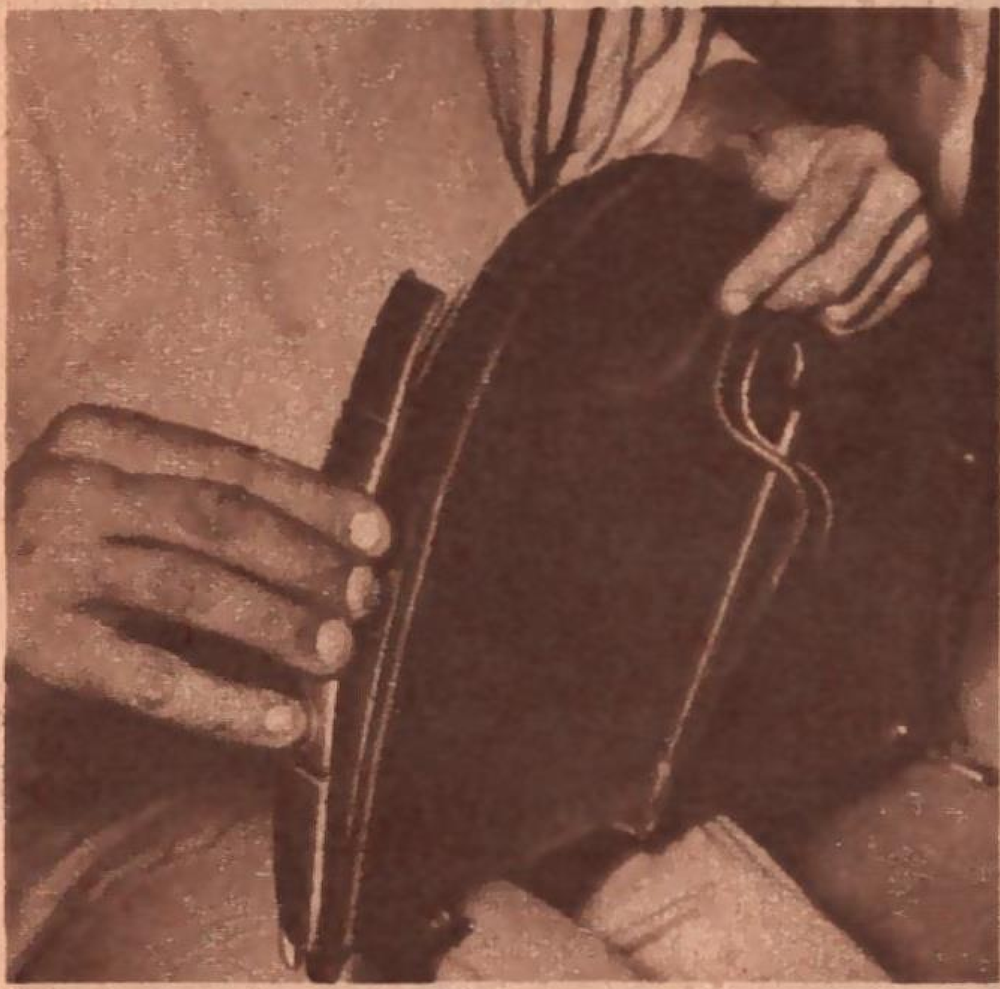
ENTHUSIASTS FOR some time now have been looking for the *certain* rear fender skirt that would fit-up to most of the late model cars. With the new '57 Mercury—it finally has arrived! The rear fender skirt of the Merc is not only just the ticket for the later models ('55, '57 Chevrolets; '55, '56, '57 Fords and Mercurys), but also fits up very well to some of the earlier models ('52 to '54 Fords and Mercurys). The skirt will fit many more various makes and models but the fad is so new that time hasn't allowed trial. The important item to remember is that the skirt's design is long and narrow—so the fender opening of the car in question would have to possess a shallow wheel opening at the rear and the fender would have to be of such a length as to accommodate the skirts lengthy panel. Popularity of the skirt is largely due to the fact, other than racy appearance, that only minimum modifications are required to transfer the stylish fender cover to another make car. The first part of this step-by-step feature explains this requisite thoroughly. The second part offers you a chance for a slight switch in appearance—that of adapting three chrome rear fender teeth from a '54 Mercury along the leading edge of the skirt to simulate a scooped-skirt design. A '57 Ford was used for the story but as you can see the innovation is one that could be worked-out on most makes and models.



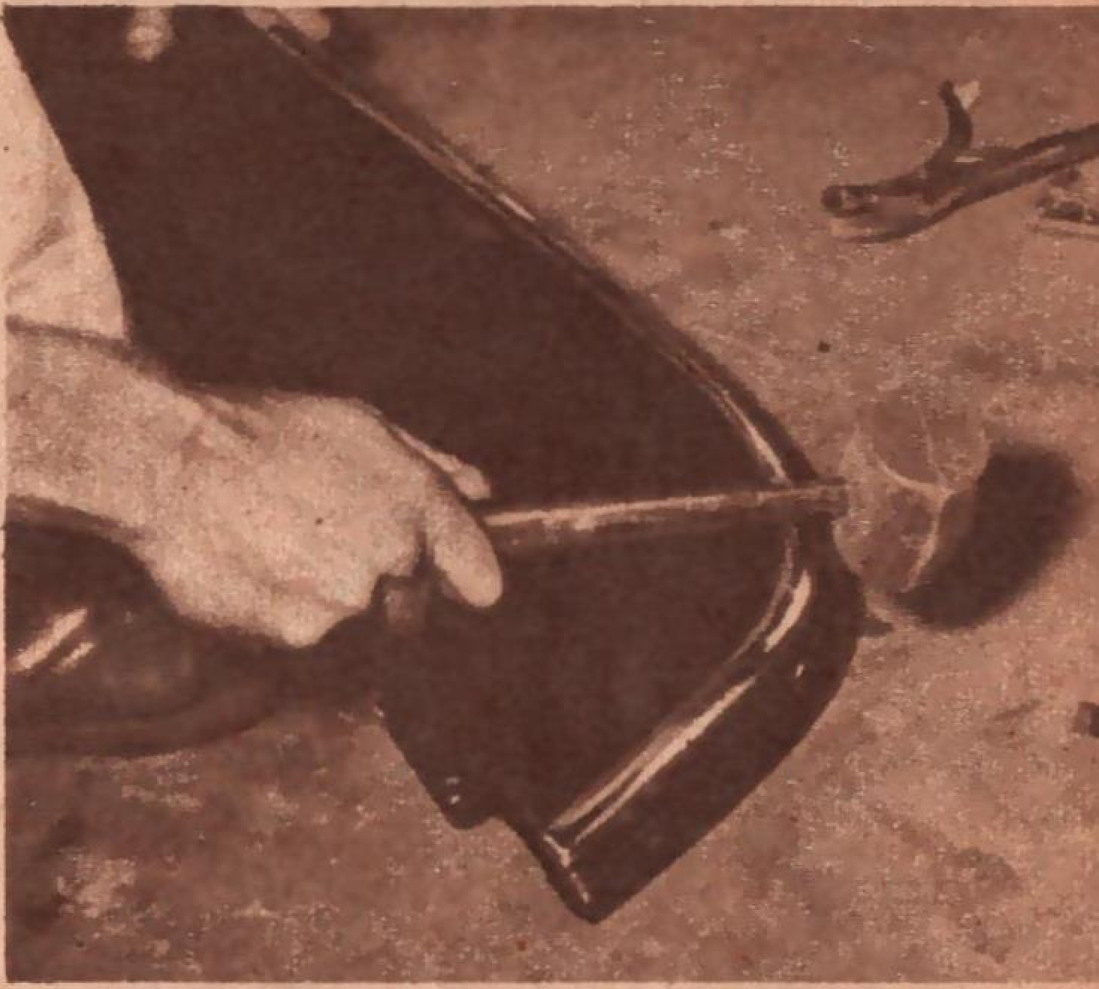
1. First loosen bolt on forward arm and swing arm forward. Bend with vise-grips.



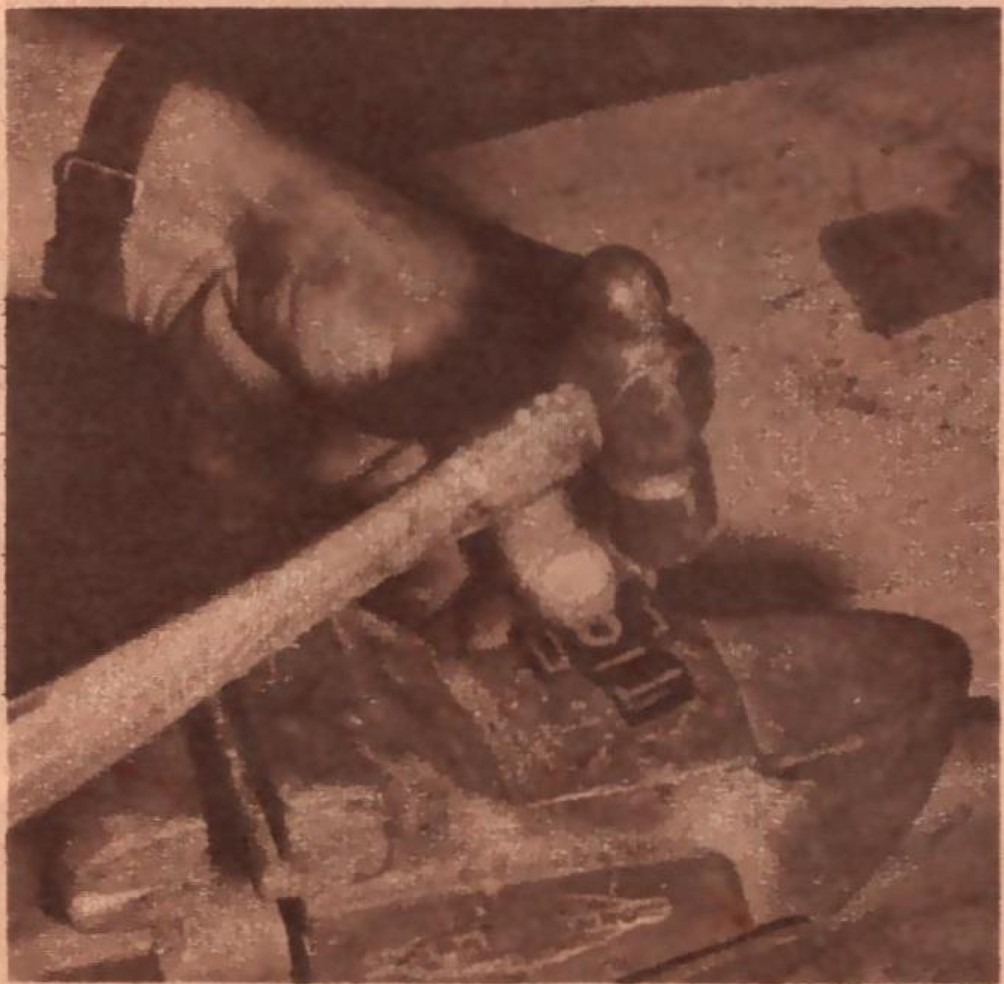
2. When bending arm, refit skirt often to determine exact modification needed.



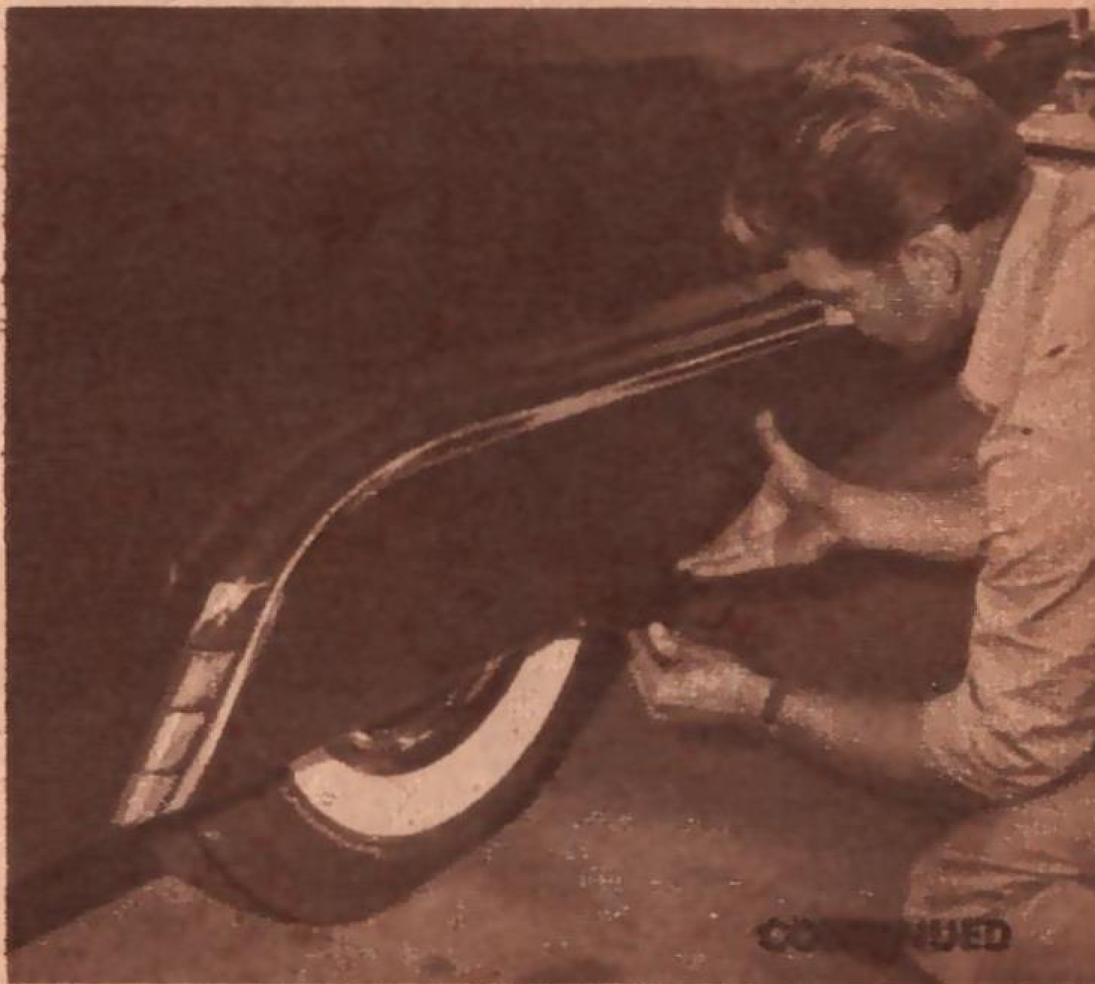
3. Chrome trim on leading edge of skirt is removed. Found necessary on '57 Ford.



4. Using rubber mallet, gently beat down forward crown so skirt will flush body.



5. Remove rear bracket and flatten slightly so that bracket fits the fender's edge.



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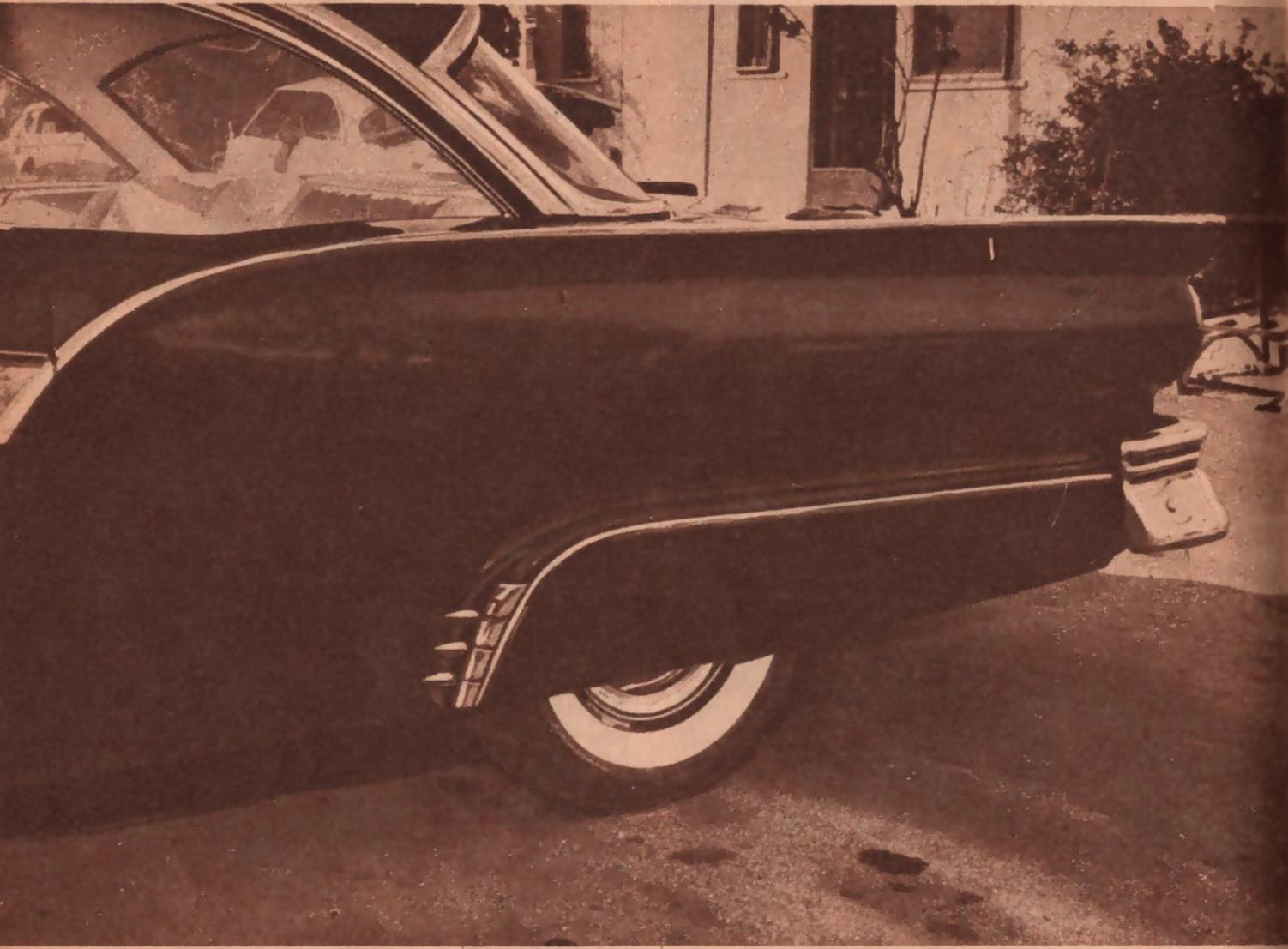
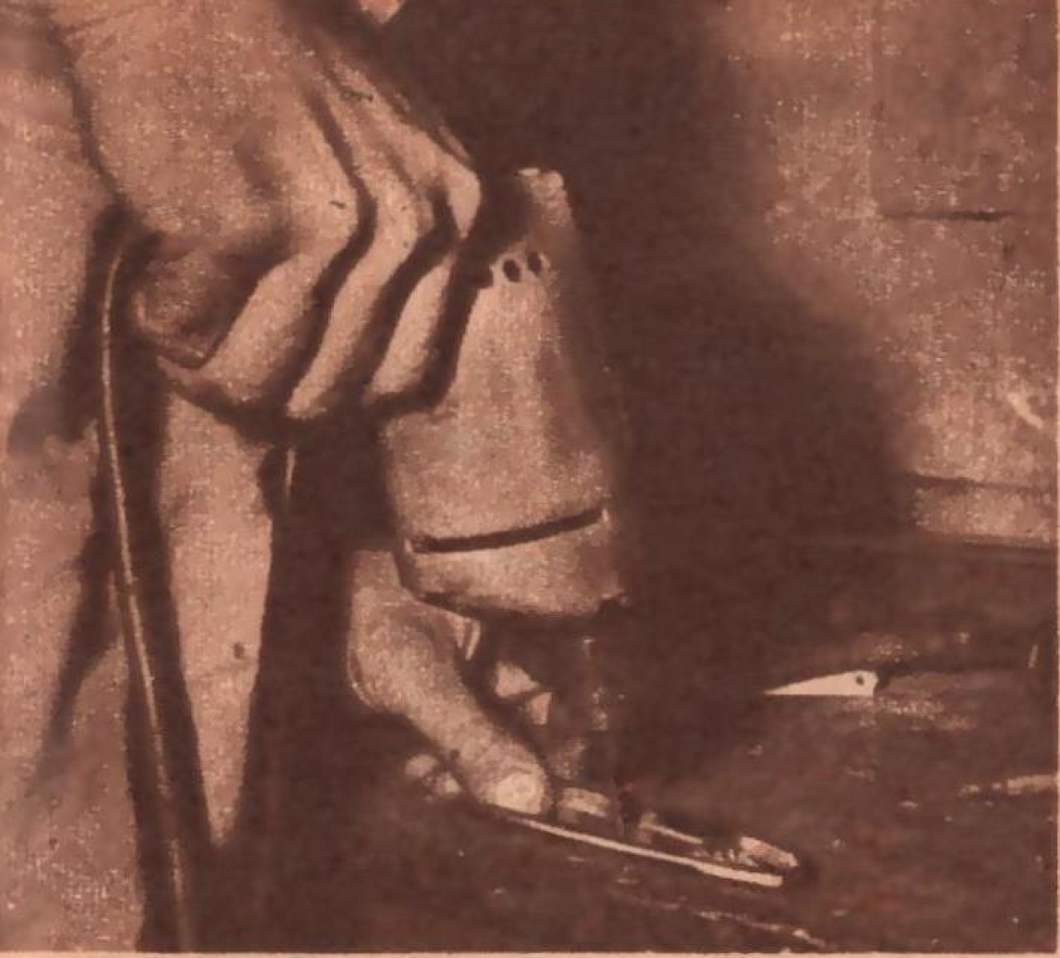
6. Secure skirt. Refitting of the skirt is necessary throughout all the modifications.

HIGH-FASHION SKIRTS continued

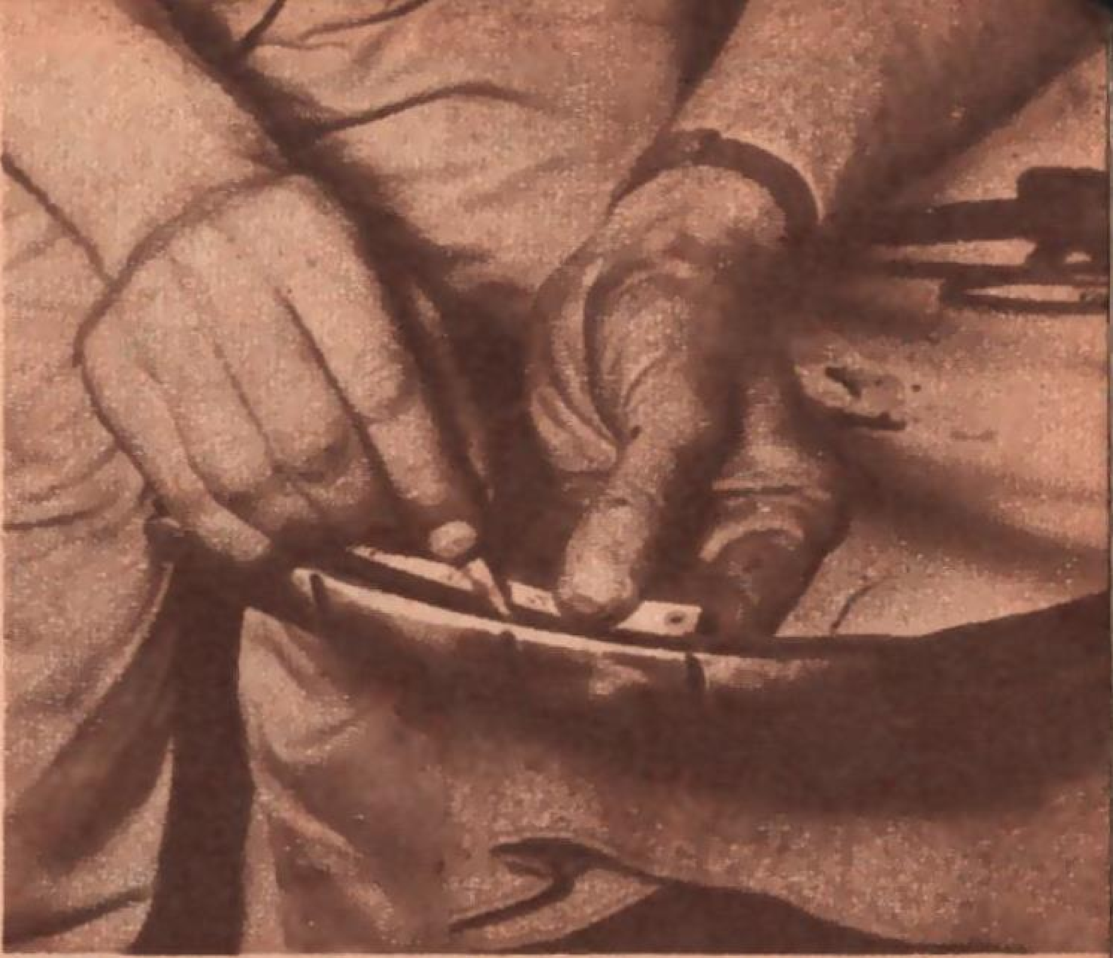


1. '54 Merc trim bars are first measured for depth. Notice end of bar that is used.

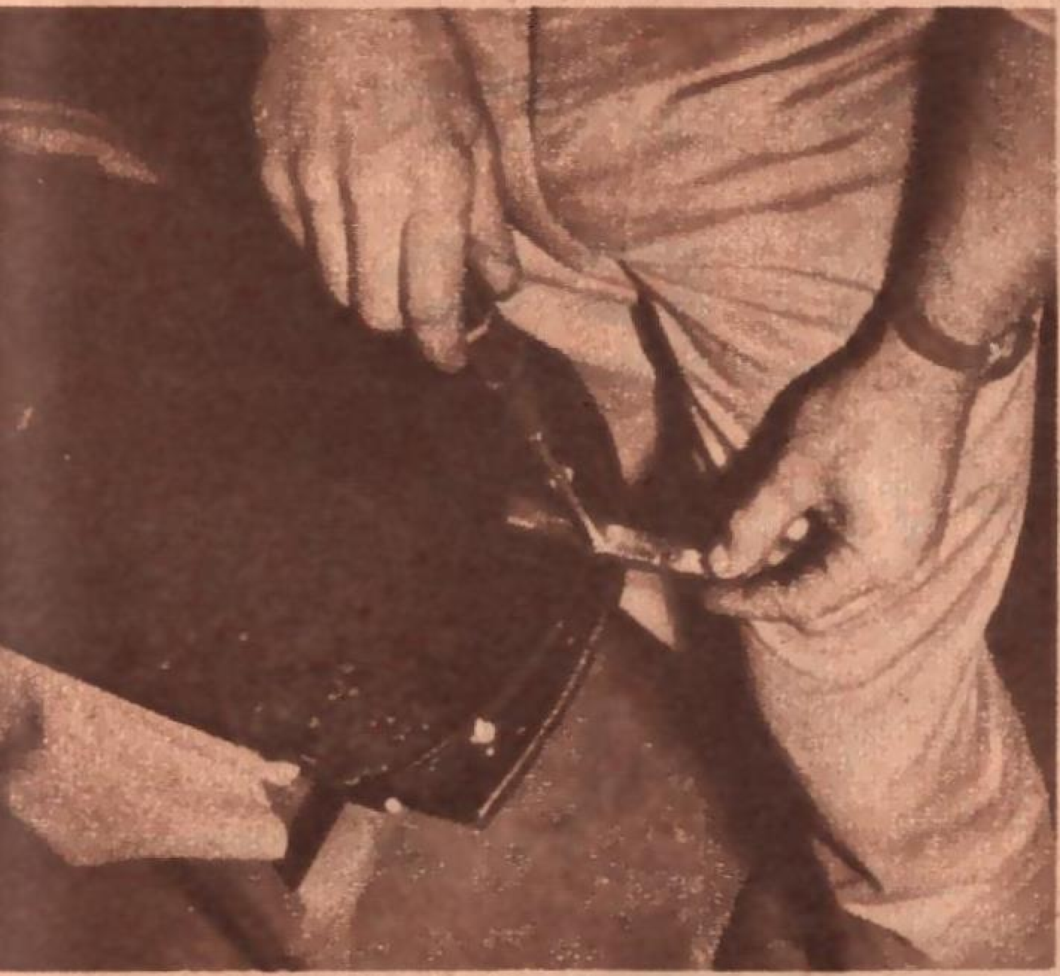
2. Next step is to cut the bars to length. Also remove the small stud found attached.



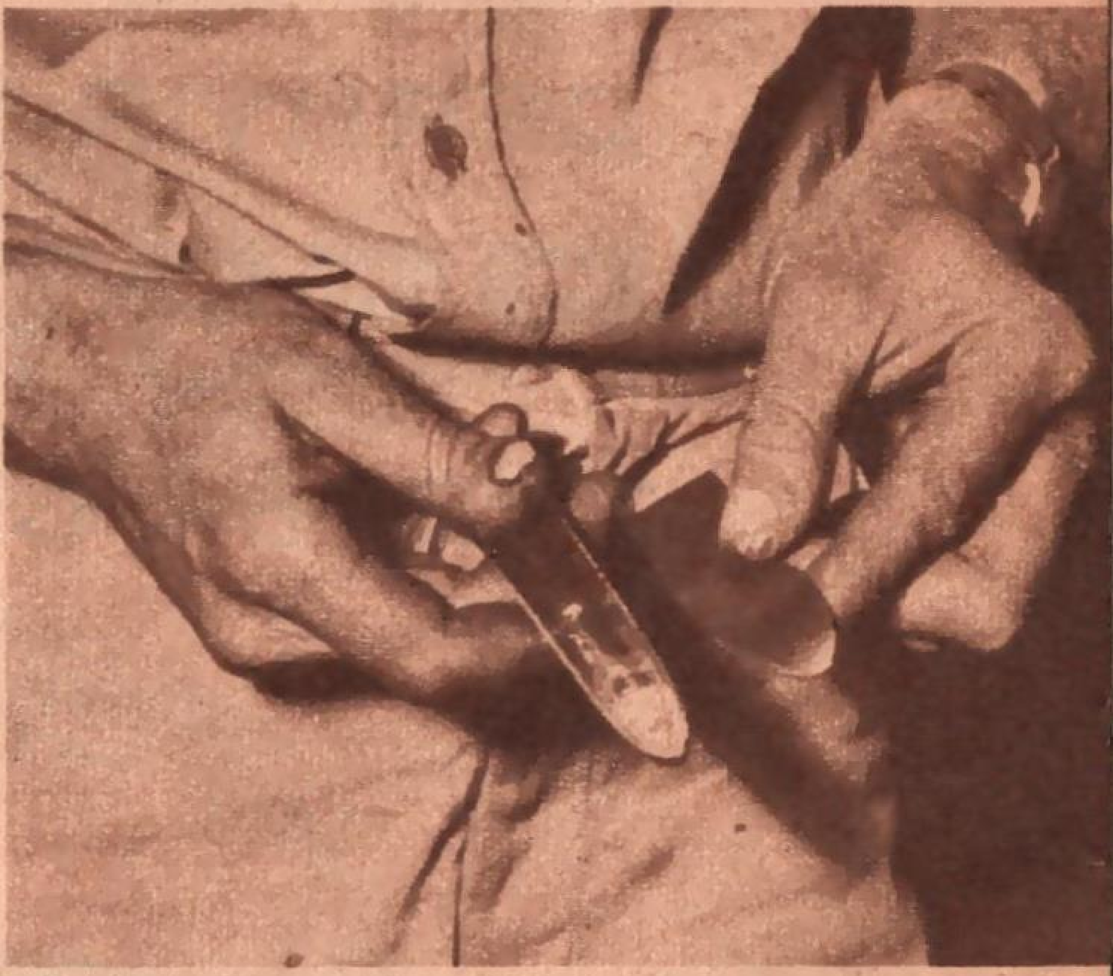
3. Center punch bars and drill small hole. Notice that the stud has been removed.



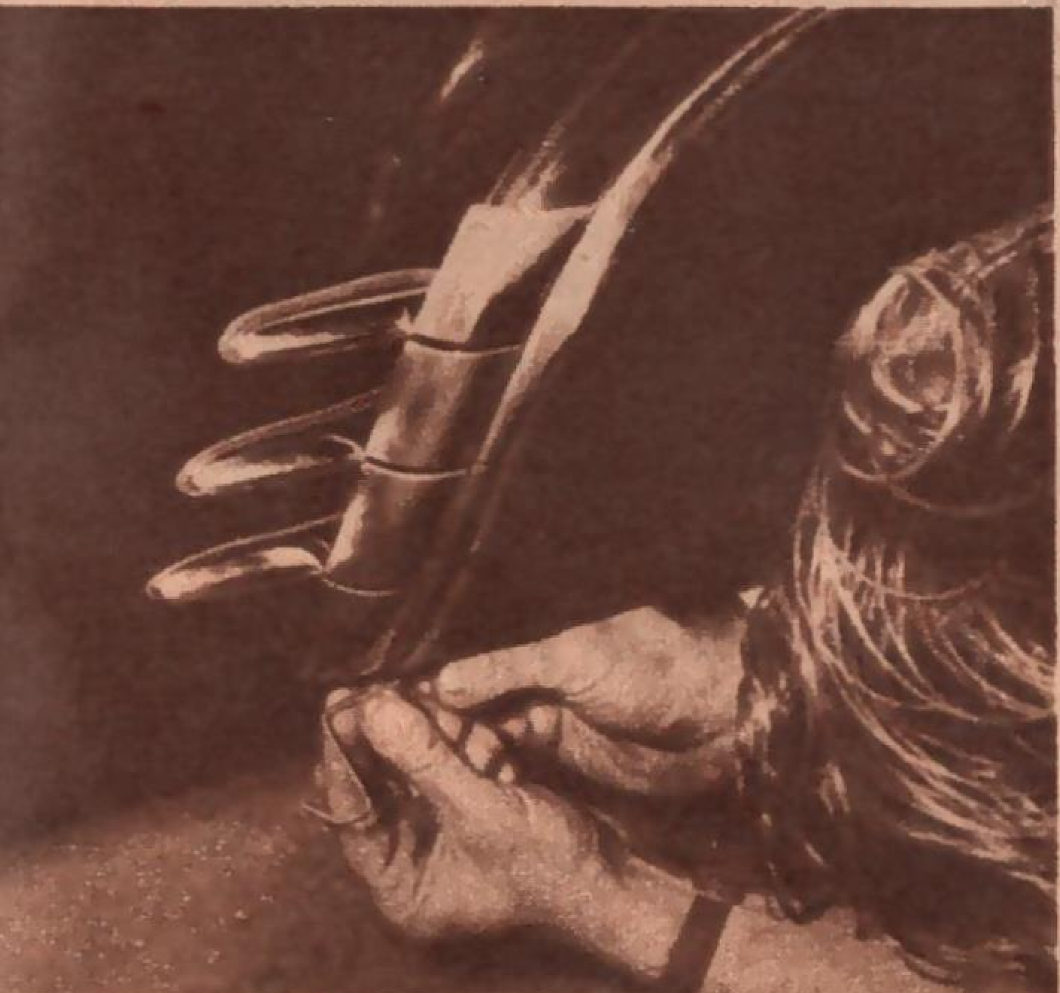
4. Now measure off position of bars along leading edge of skirt. Drill small hole.



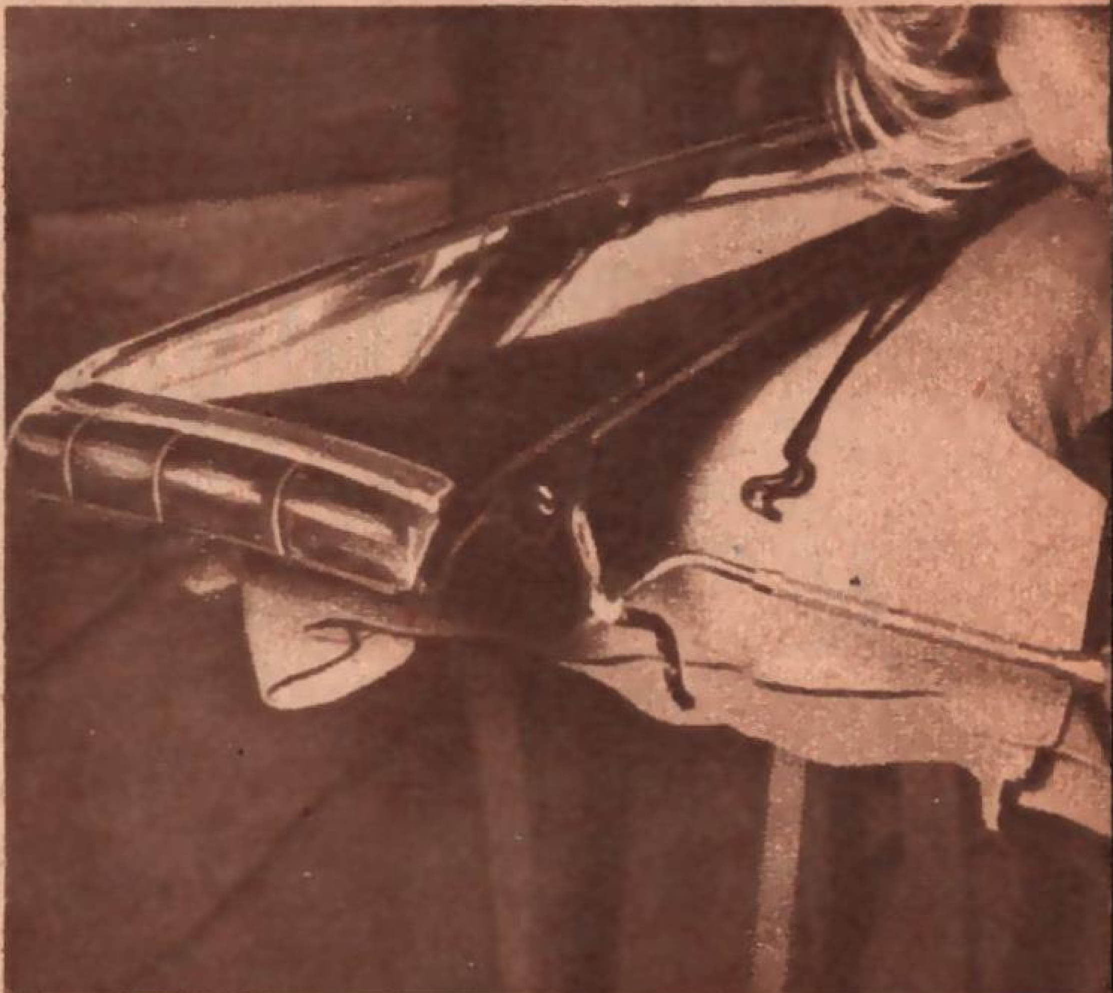
5. Trim bars are now securely attached to skirt edge using small metal screws.



6. Small rubber pads are cut and glued to bars so the bars will not chafe body.



7. With skirt positioned, a wire template is made determining modifications of arm.

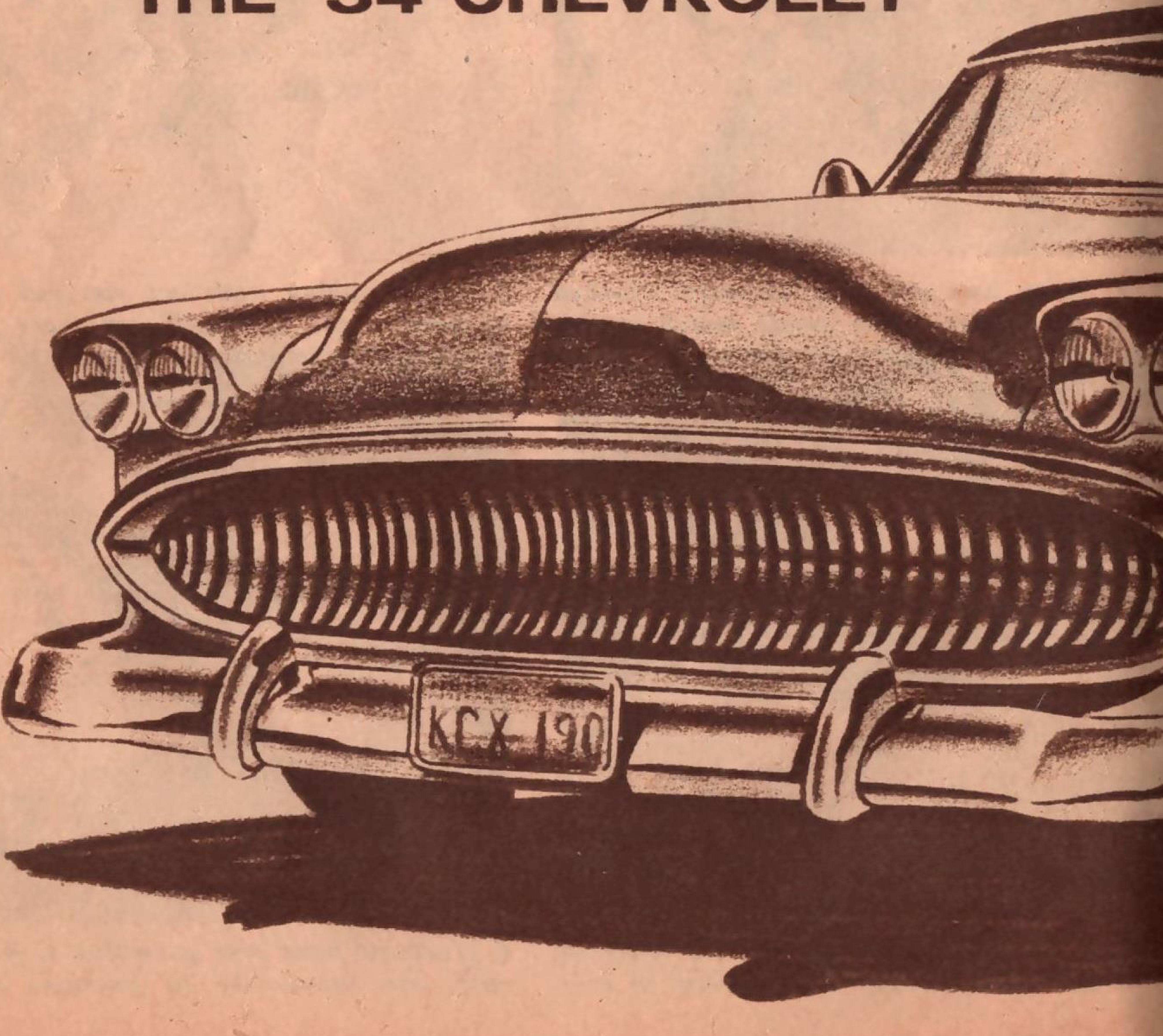


8. Heat and bend arm accordingly. Modify rear arm identically to previous story.

George Cerny

Carl Cerny

CERNY'S BODY SHOP RESTYLES THE '54 CHEVROLET

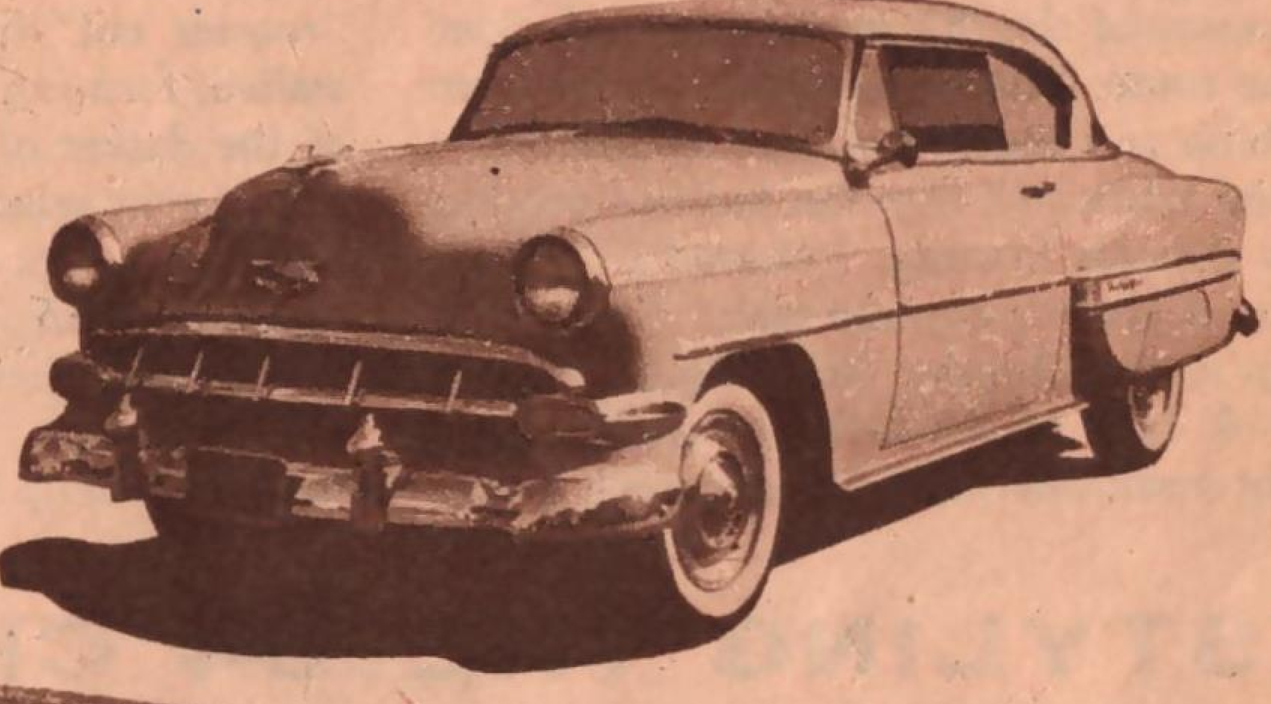


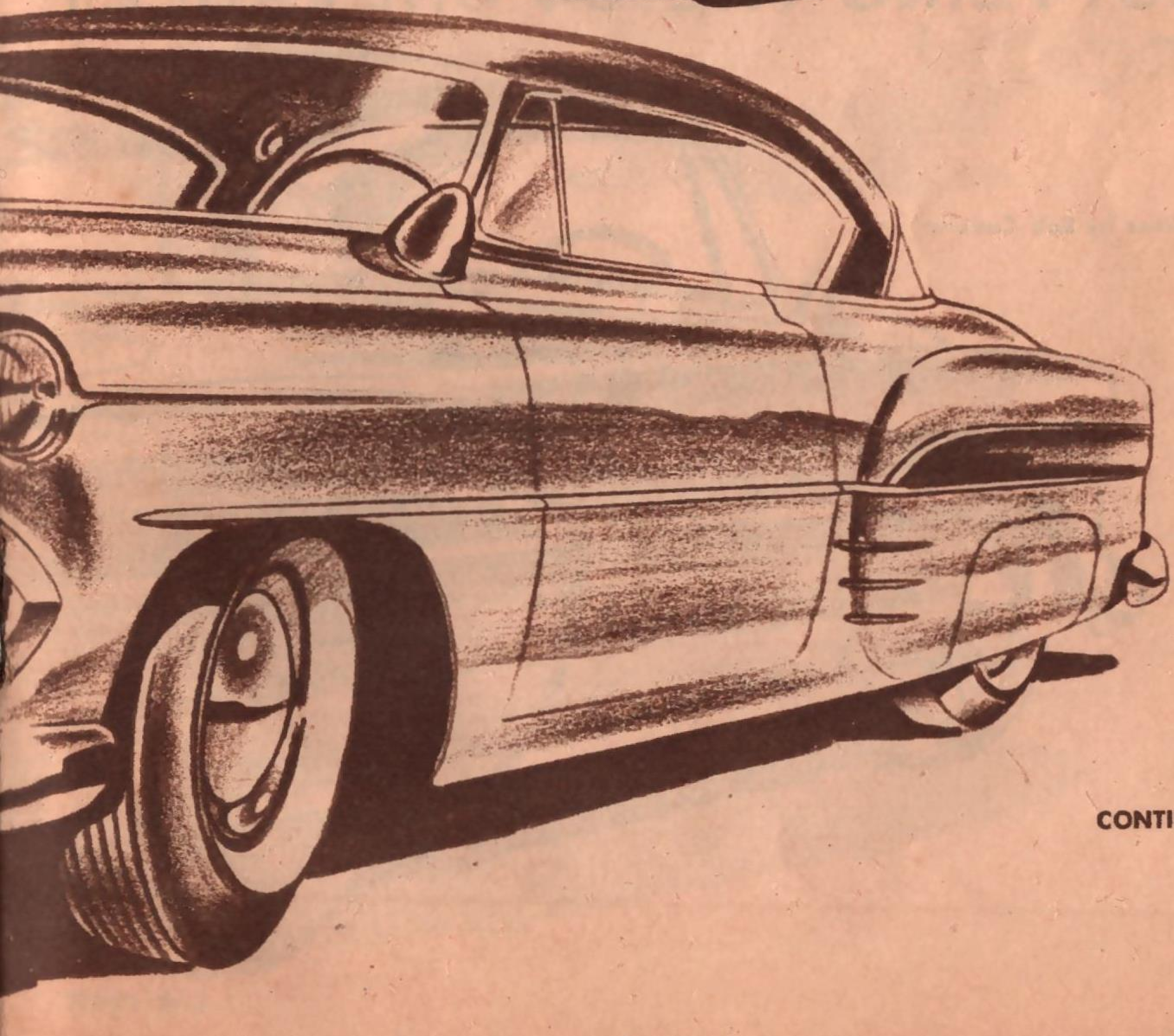
CHEVROLETS HAVE ALWAYS been "custom bait" since the hobby began, with enthusiasts ready to argue at the slightest provocation over which model is most suitable for restyling. Although '55 and '56 models with moderate modifications are to be seen everywhere, the '54 series is much less common, and a good bet for the fellow who wants to wind-up with a car that's really different.

With this thought in mind, Cerny's Body Shop of Compton, California, was commissioned to come up with their version of a restyled '54 Chev hardtop for the consideration of Car Craft's readers. Operating within the mythical budget of $1,000, George and Carl Cerny, principals of the concern, have arrived at a unique combination of ingredients and techniques resulting in a modernized Chev that still manages to retain a trace of the more conservative styling of '54 as compared to the wilder look of the '57 models.

BODY MODIFICATIONS

After being lowered both fore and aft, the looks of our Chev began to change. Removal of both door and deck lid handles required the installation of electric solenoids in their place. All external trim and medallions were re-





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moved, to have their place taken by a solitary strip of chrome from a '52 Chevrolet. Cerny believes, as do most custom shop operators, that ommission of at least one piece of horizontal chrome along the side of any car leaves it looking unfinished, and both higher and thicker through the body than it really is.

HOOD, GRILLE AND HEADLIGHT MODIFICATIONS

When the hood had been subjected to a chrome-removal session similar to that undergone by the body, Cerny set about to create an unusual front-end-motif that would bring our '54 Stovebolt up to date. Shaded quad headlights and a full-width grille, both unmistakable features of the '57 models, were decided to be the route. The grille was made up from split tubing and round rod, both contoured to shape and fabricated into the finished product through delicate brazing, followed by a bath in the local plater's chrome tank.

A trip to the Chrysler dealer's parts department took care of the lack of suitable quad headlight assemblies, and Cerny's torch quickly arranged for the lights to get right in style by wearing a set of shades. Installation of the grille required recontouring the lower portion of the body, of course, but the same area had to be changed to accommodate the quad headlights, too — so Cerny did them all at once.

REAR FENDER AND TAILLIGHT MODIFICATIONS

Removing the gas tank filler neck from the fender and relocating it within the trunk paved the way for the filling-in of the filler access door. This left both fenders looking the same, leaving the path open for new restyling.

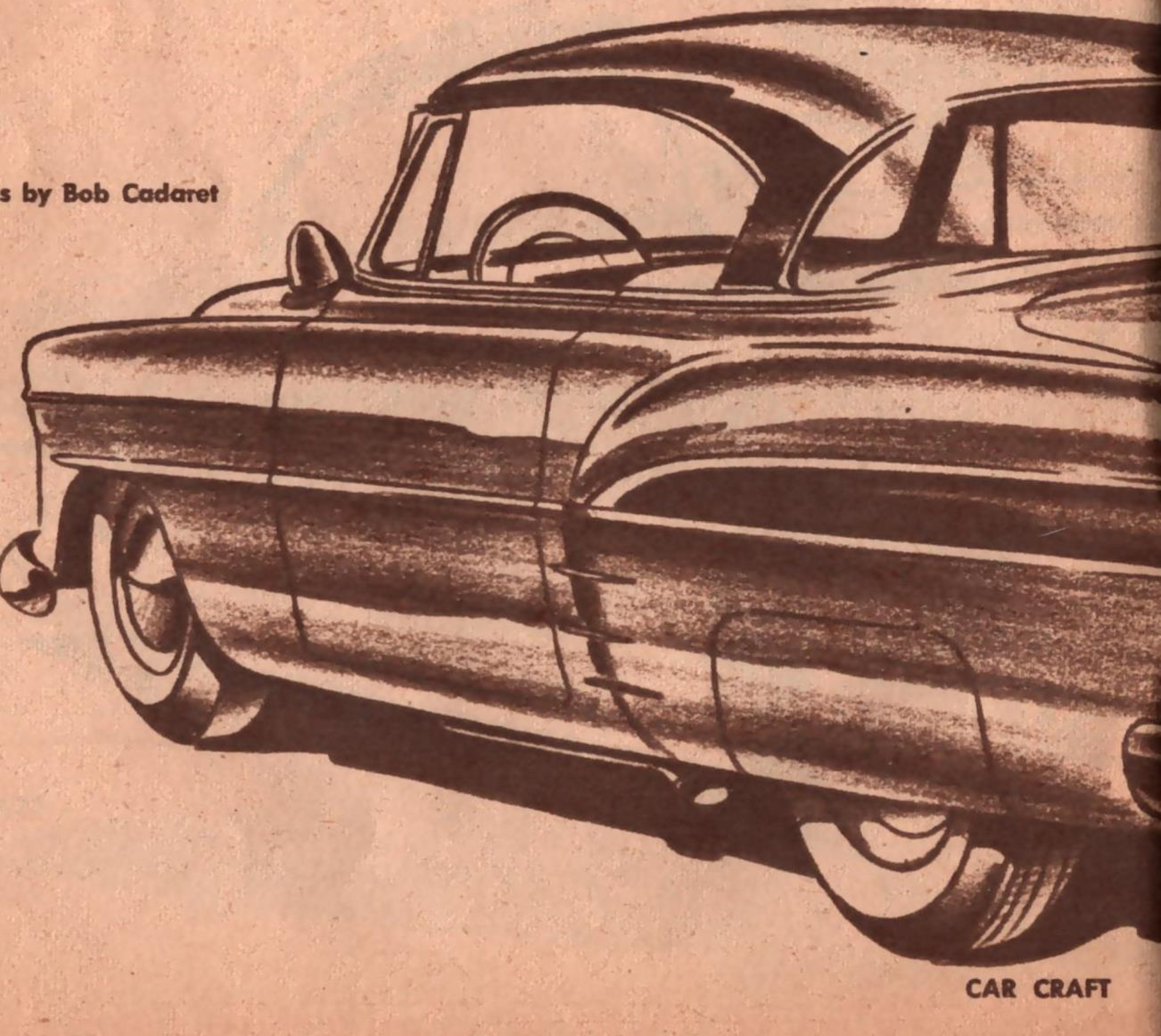
Cerny chose to replace the chrome fender pads with the chrome teeth from a '53 Mercury, while above the main side trim strip the "rooster tail" from '57 Chev fenders was installed, forming a natural area for a repetition of the darker of the two shades of Irridescent Blue Cerny selected to grace this particular car. This same dark shade is also used on the top, while the remainder glistens in a lighter hue.

Taillight changes were confined to replacing the stock '54 Chev rims with custom shades made up by Cerny and then frenched to

RESTYLING THE '54 CHEVROLET

continued

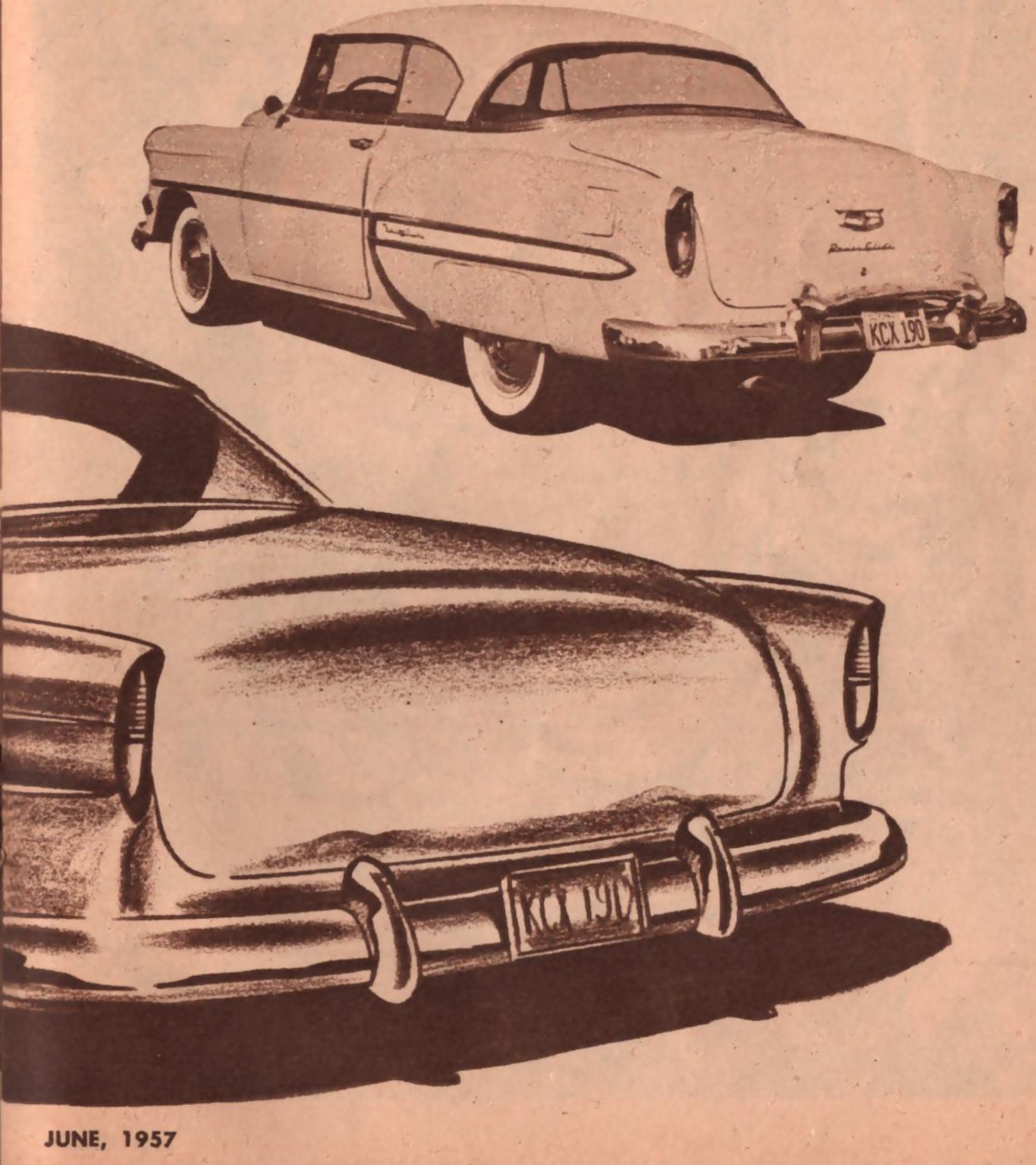
Illustrations by Bob Cadaret



the main body of the fender itself. A clever custom innovation seldom seen was the sectioning of the bumper guards, both front and rear, to eliminate the ugly "bullet" portion that was featured on the stock version.

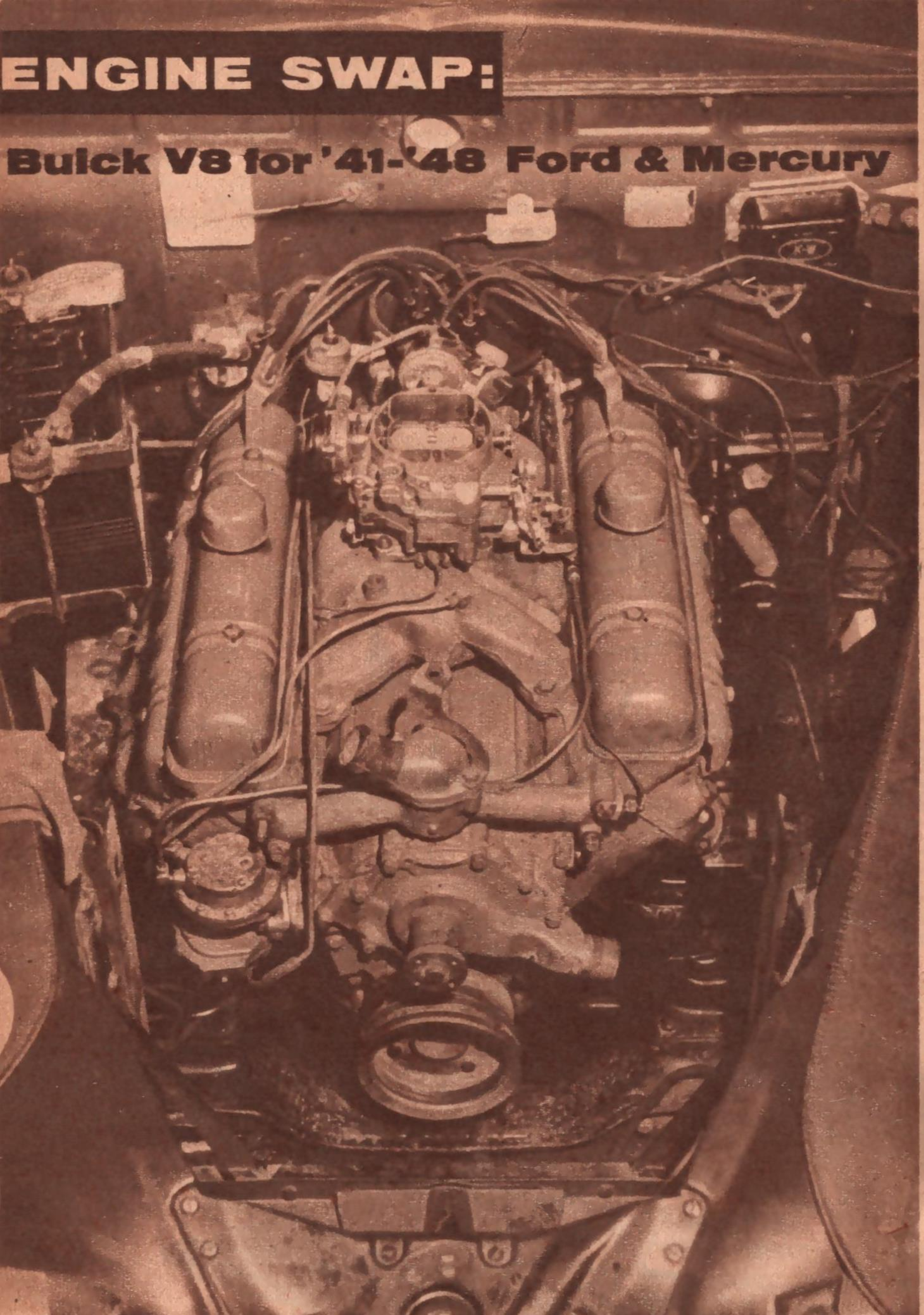
Three years of intensive effort by the custom fraternity has brought about little change in the popularity of the '54 Chev — apparently no matter how many custom innovations are developed for this car, more will be ready to take their place. With the introduction of new styling slants like full-width grilles and quad headlights, the end of the '54 Chev's popularity is far from being in sight.

PARTS AND PRICE LIST	Labor	Parts
Remove door handles and install electrical push button system	$ 50.00	$ 10.00
Fill gas neck cover and relocate in trunk	35.00	——
Fill chrome fender pad holes and install '53 Merc teeth	30.00	18.00
Fill skirt bottoms, pair	32.00	——
French taillights	40.00	——
Fill deck lid and install electrical push button system	25.00	10.00
Rework rear bumper guards	10.00	——
Fill hood	85.00	——
Build special custom grille	150.00	50.00
Dual headlights	125.00	33.00
Side trim ('52 and '57 Chev components)	30.00	36.00
Lower front and rear	13.00	5.00
Rework front bumper guards	15.00	——
Paint 2-tone lacquer	150.00	35.00
	790.00	197.00
	197.00	
TOTAL	$987.00	



ENGINE SWAP:

Buick V8 for '41-'48 Ford & Mercury



BOLT-IN BOMB

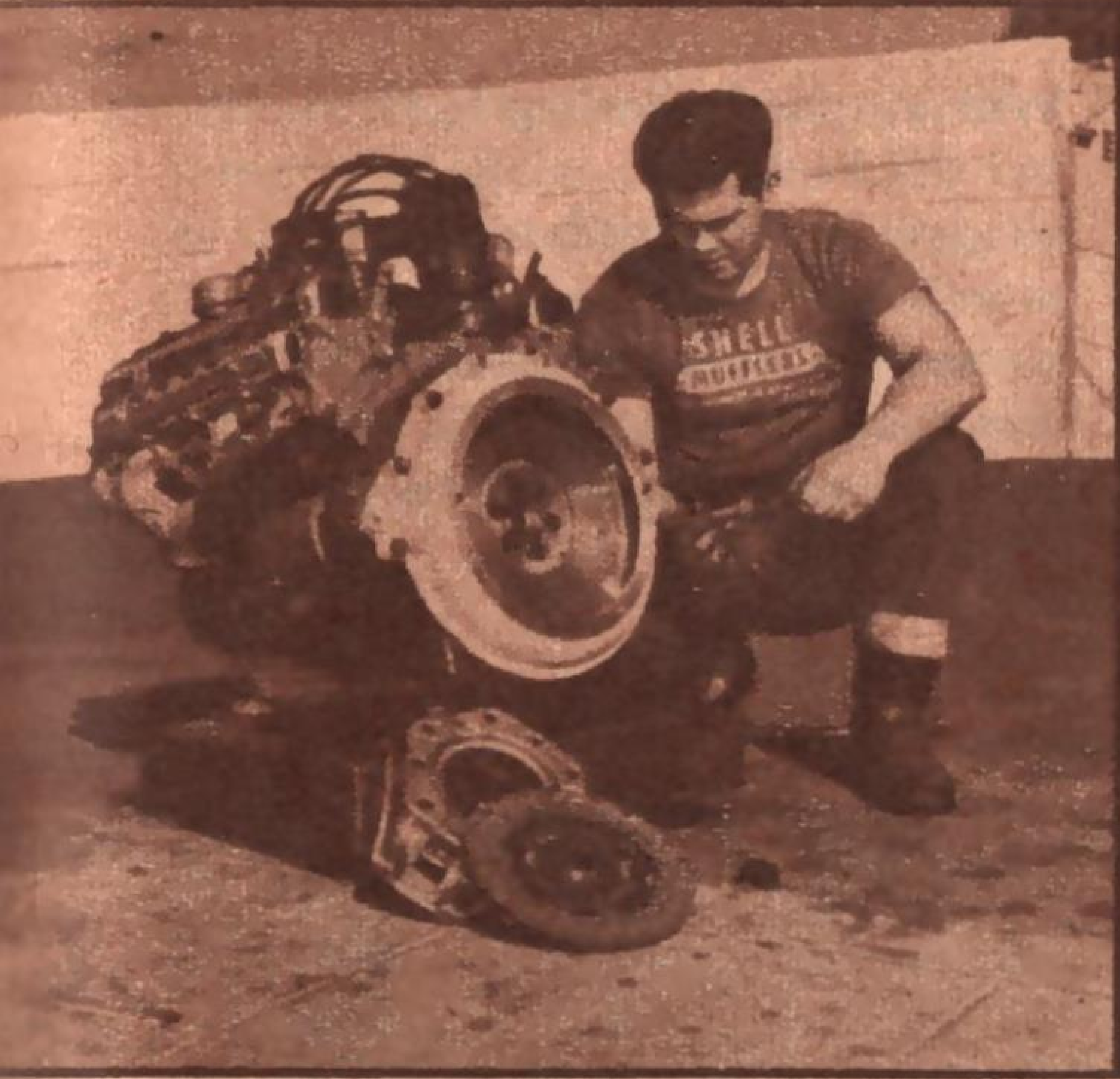
BY BOB PENDERGAST

WOULD-BE ENGINE SWAPPERS by the thousands take up some other hobby when confronted by the cold hard facts regarding time and money to install most worthwhile late model OHV engines in earlier chassis — but here's one that really falls into the category of the "pepper tree" mechanic!

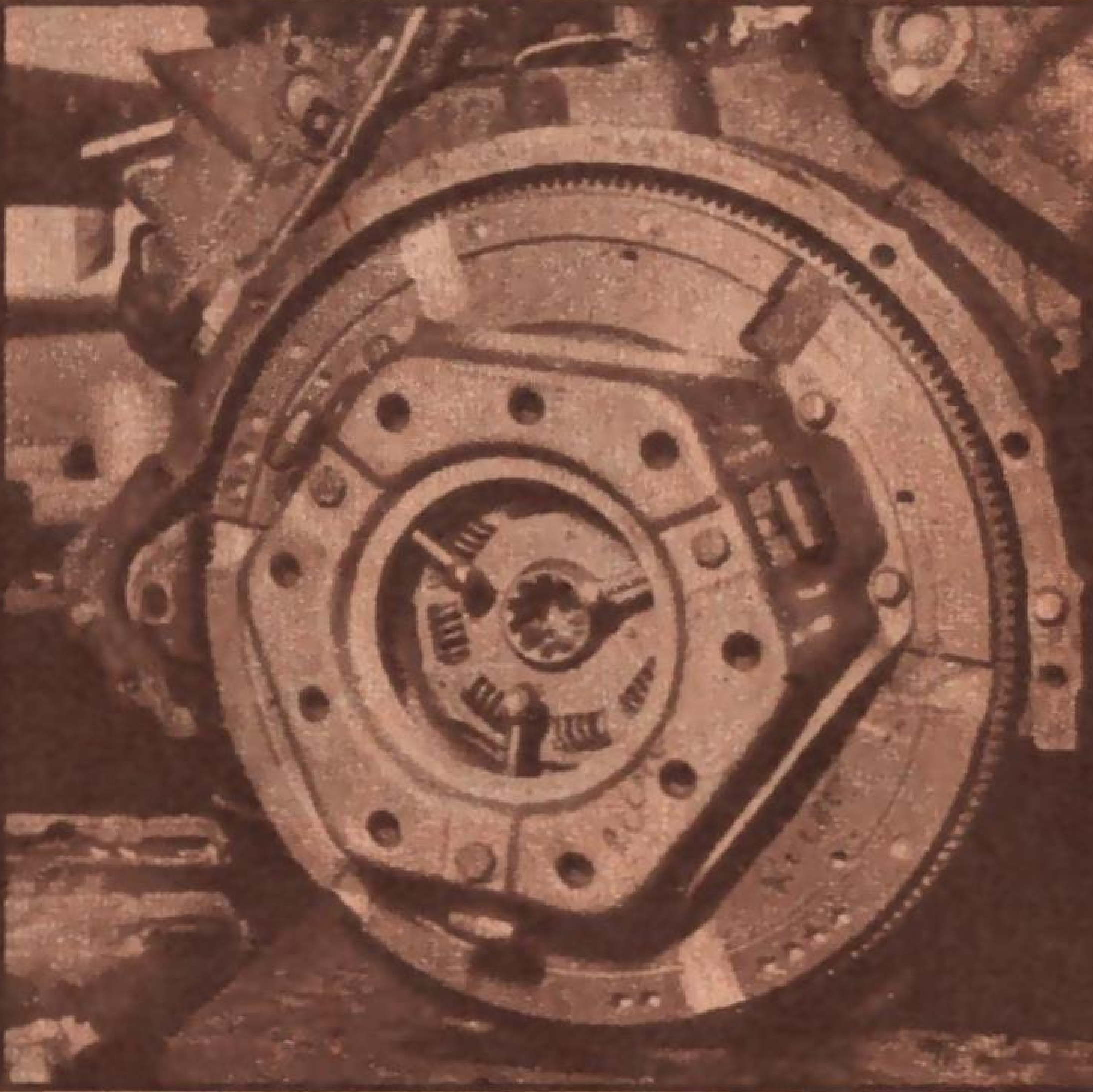
Even if you don't have access to a welding outfit, you can install a Buick V8 in your '41-'48 Ford or Mercury by following the step-by-step pictorial description presented here of the installation performed for Tommy Tomlison of San Francisco, by Shell Motors of West Los Angeles, California.

Tommy's Merc literally coasted into the Shell shop powered by an engine with a pan full of water from several irreparable cracks in the block. Harry Paulson of the Shell staff discarded the willing, but not able flathead, and set to work at installing the Buick. He was pleasantly surprised to find nothing in the way of welding on the job that couldn't be handled at your nearest muffler shop. If you're the proud owner of one of the countless cars produced by Ford and Mercury during the '41-'48 period, and are hungry for horsepower — the Buick is the one for you!

Photos by Eric Rickman



Cragar bell housing adaptor was obtained and attached to '55 Buick Roadmaster V8 selected for this conversion. Pilot bearing adaptor necessary to center Ford or Mercury transmission mainshaft in Buick crankshaft is included with housing.



The Buick flywheel was redrilled for use with a Ford 10" pressure plate and clutch disc. With adaptor, pilot bearing, and clutch assembly in place, a trial fitting in the Merc's engine compartment was made before going further.

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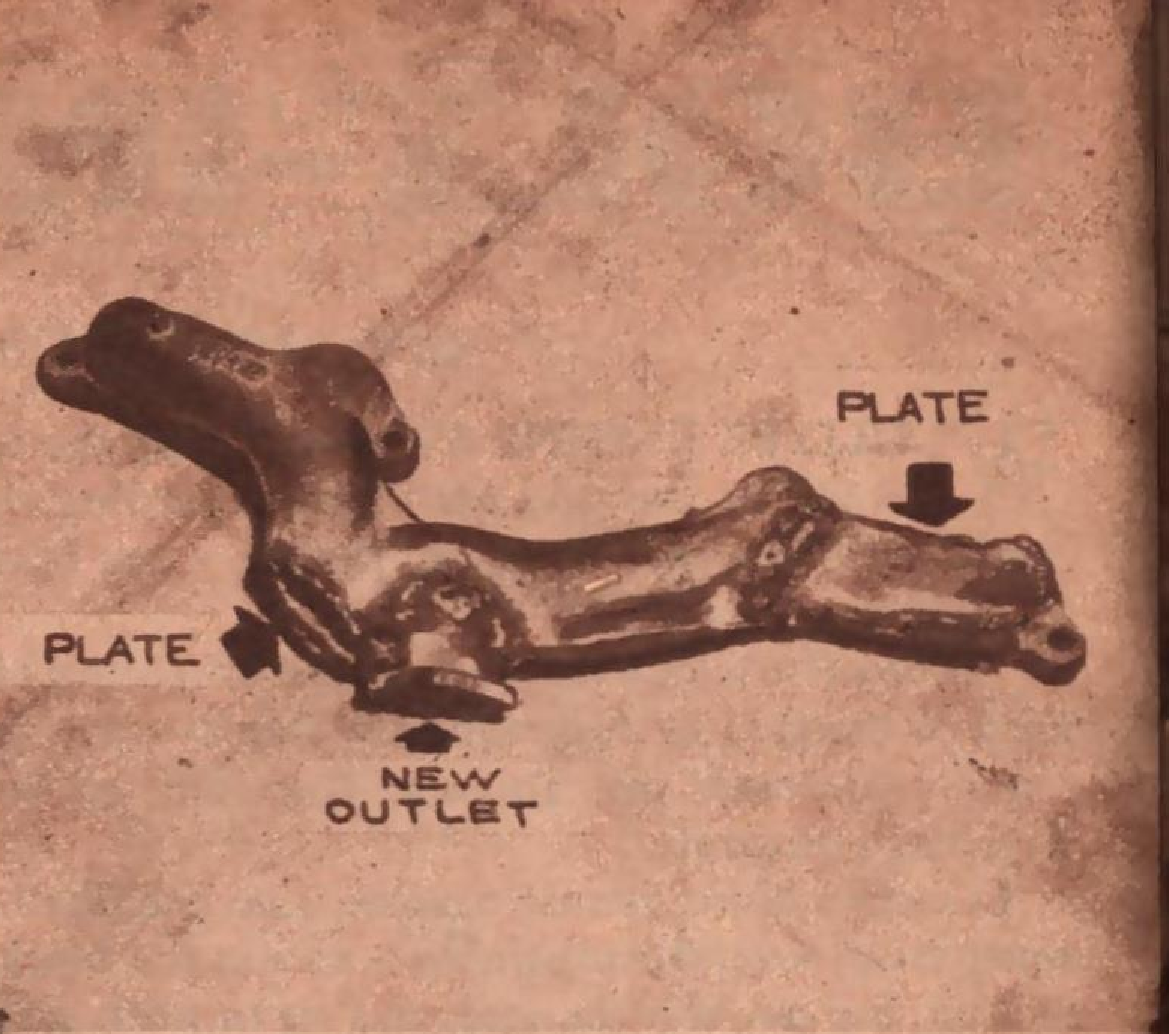
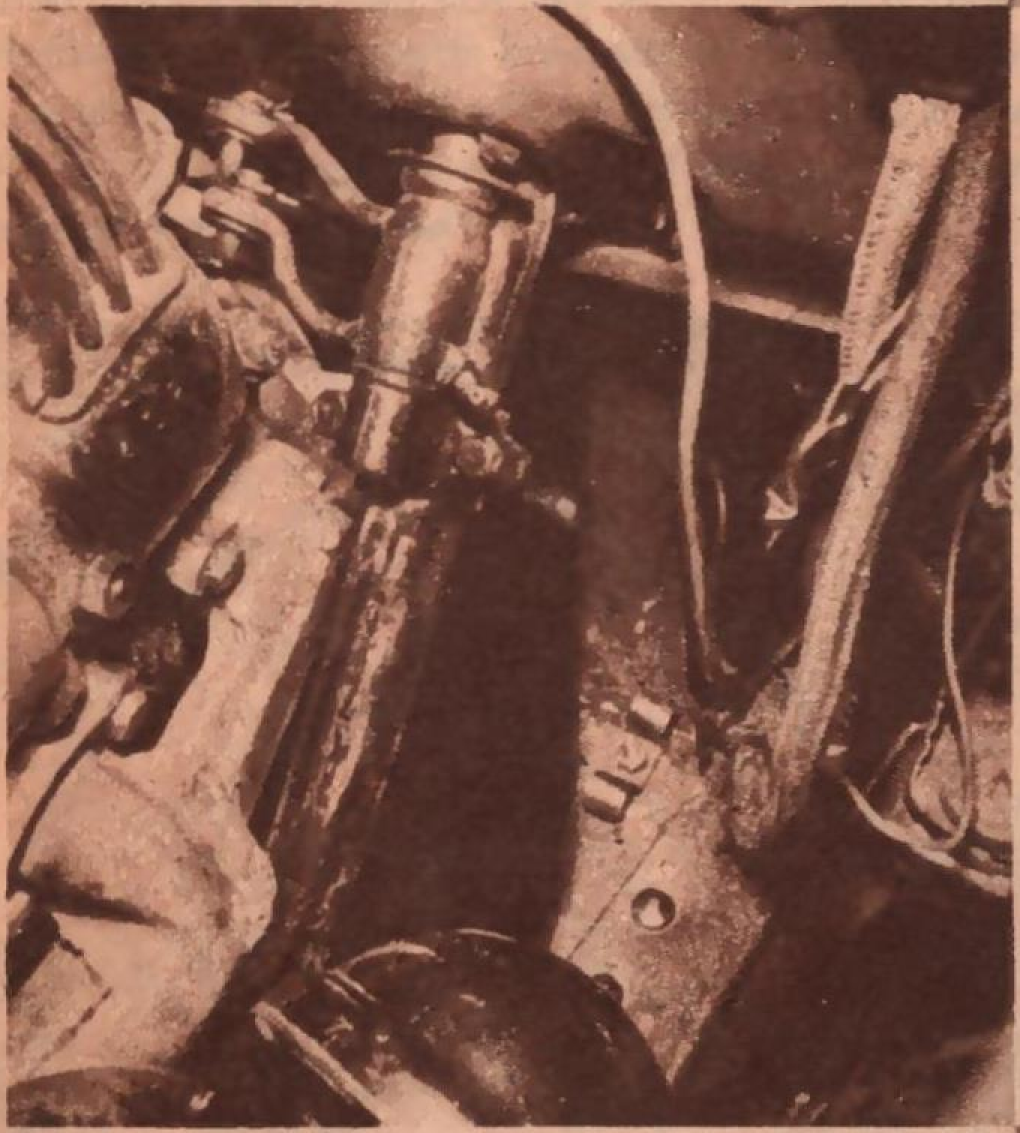
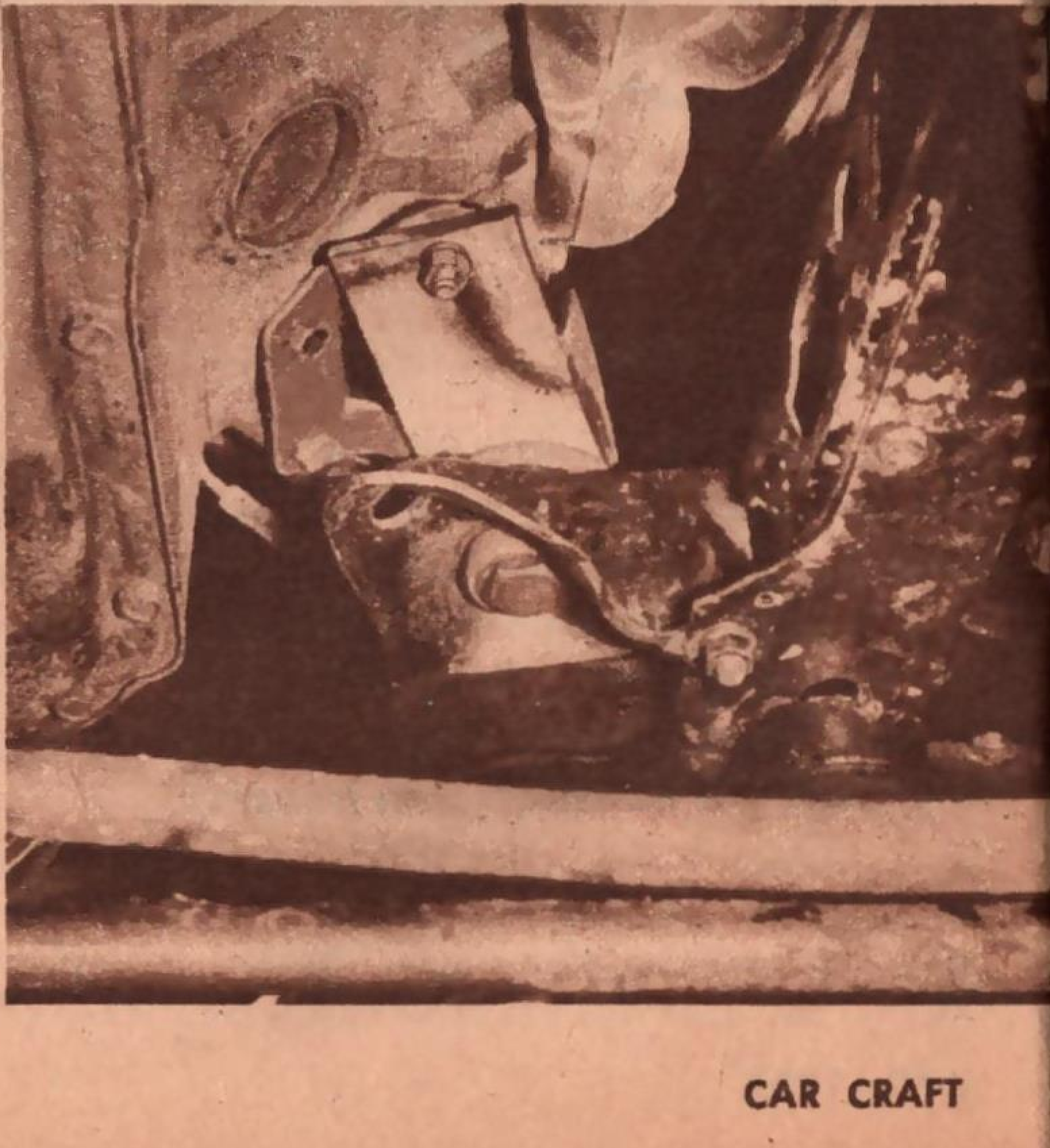
Trial fit-up showed a lack of clearance between the left-side Buick exhaust manifold and the Merc steering column and shift linkage. The linkage was easily bent out of the way, but the manifold needed its outlet relocated and a section narrowed.

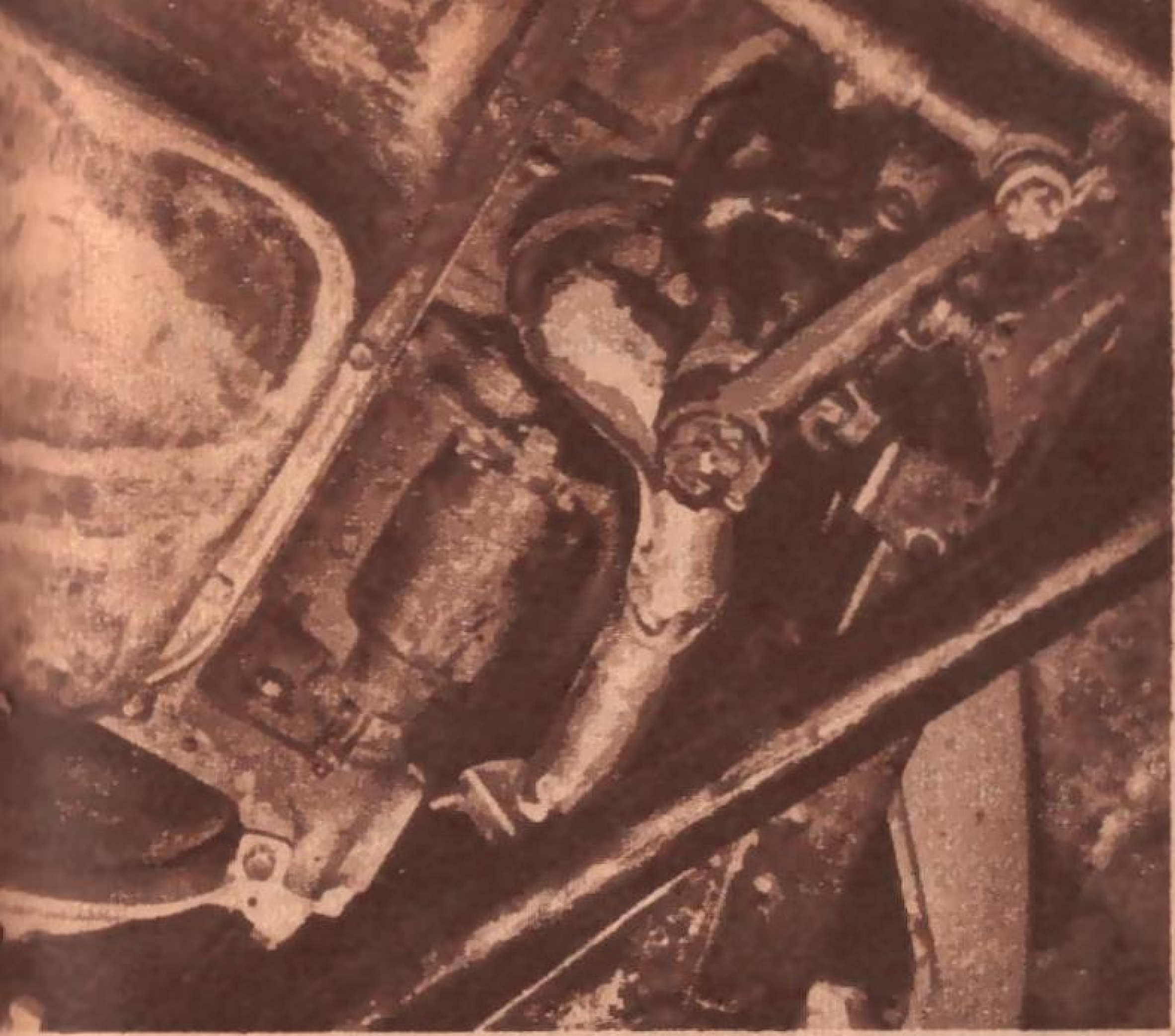




With engine bolted-up to transmission, but still hanging from hoist in front, success of linkage-bending and manifold-modifying measures can be seen. Clearance on the other side was found adequate after moving out forward end of battery-box.

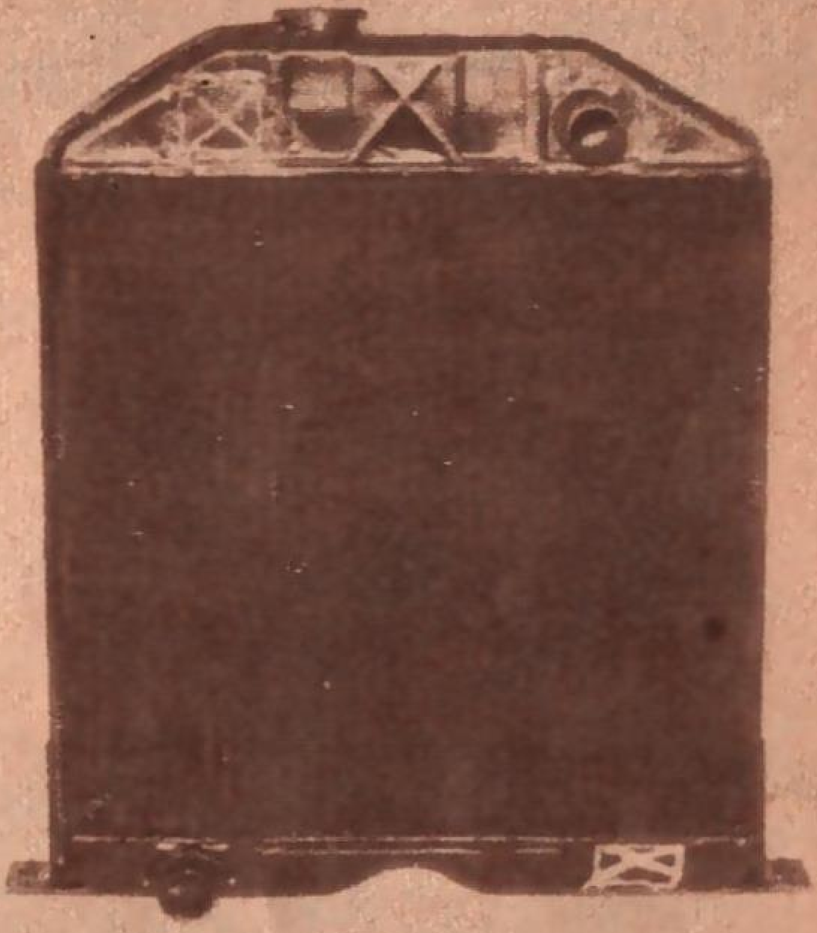
Front mounts were simplicity personified. A piece of 2" by ¼" angle iron was drilled to take the stock Buick mounting bolts in the rear and the single Mercury mounting bolt in front. The Buick Roadmaster engine actually sits further back!

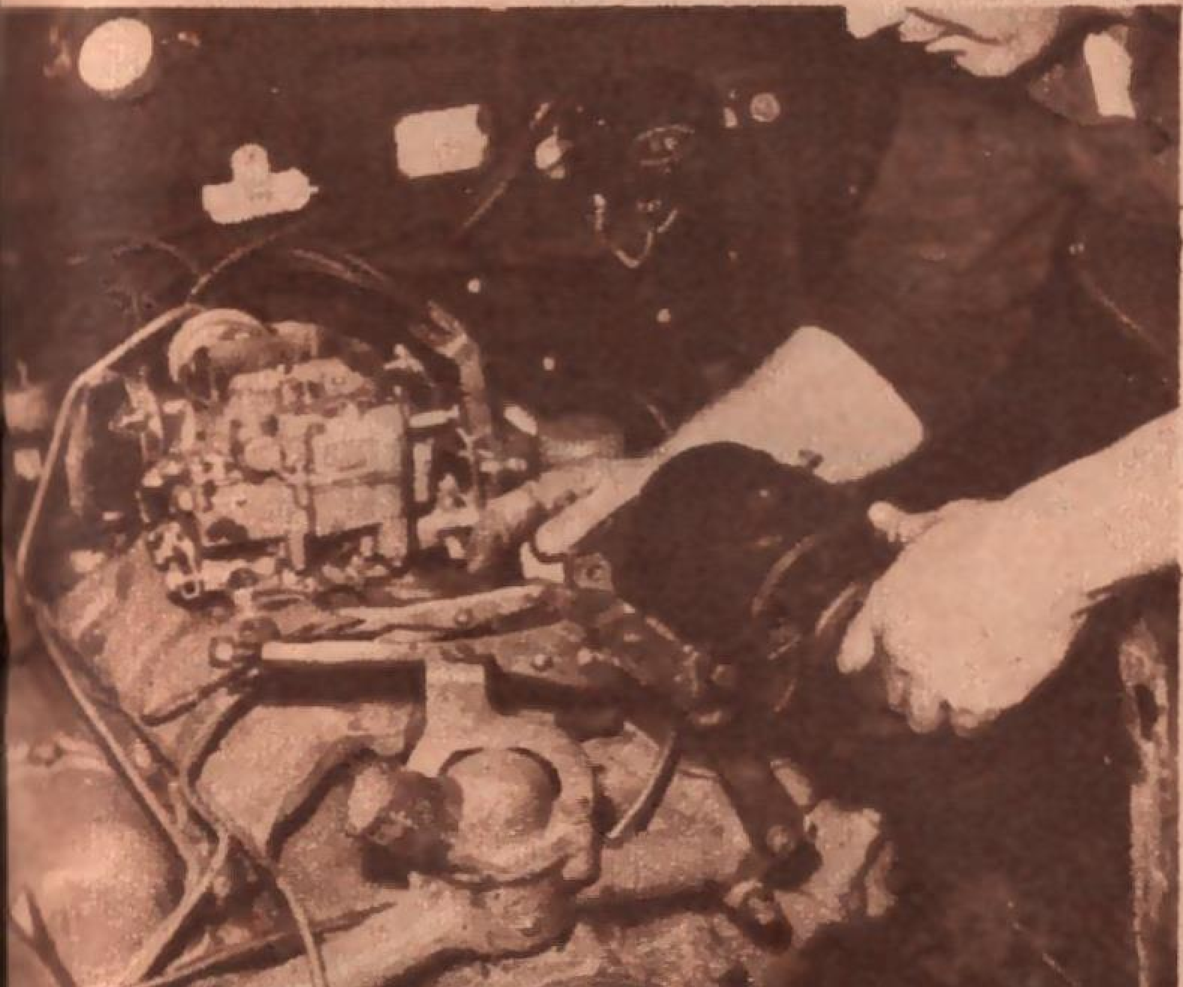




Exhaust system routing, although complicated appearing, is a run-of-the-mill job for any really good muffler shop. Sectioning of oil pan for steering linkage clearance was one of the common engine swap practices that wasn't needed here.

The stock Mercury radiator was retained in its original position. The upper left and lower right inlet and outlet necks were changed to 1 5/8" diameter to take the same size hoses as the fittings on the Buick. Those remaining were blocked.

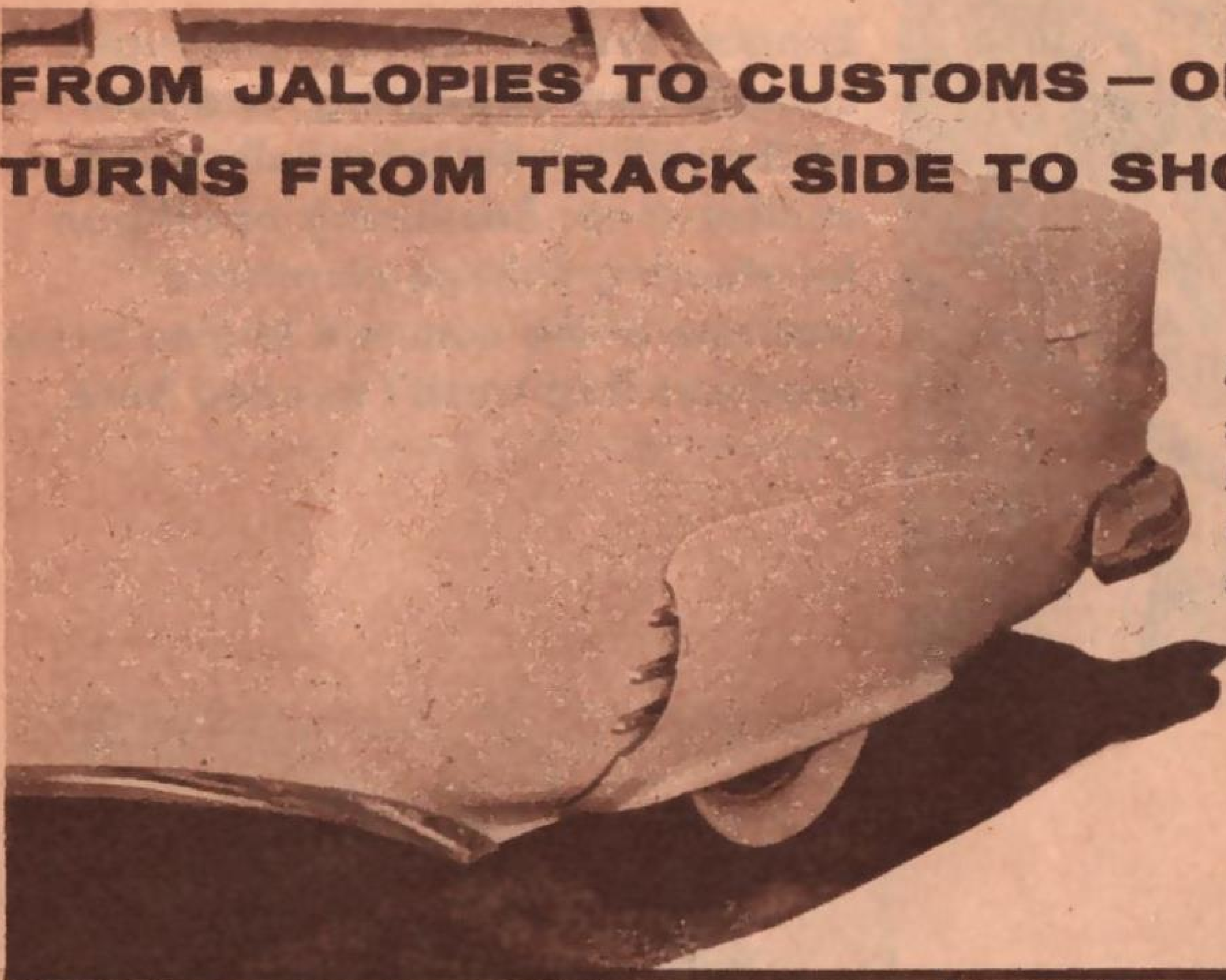




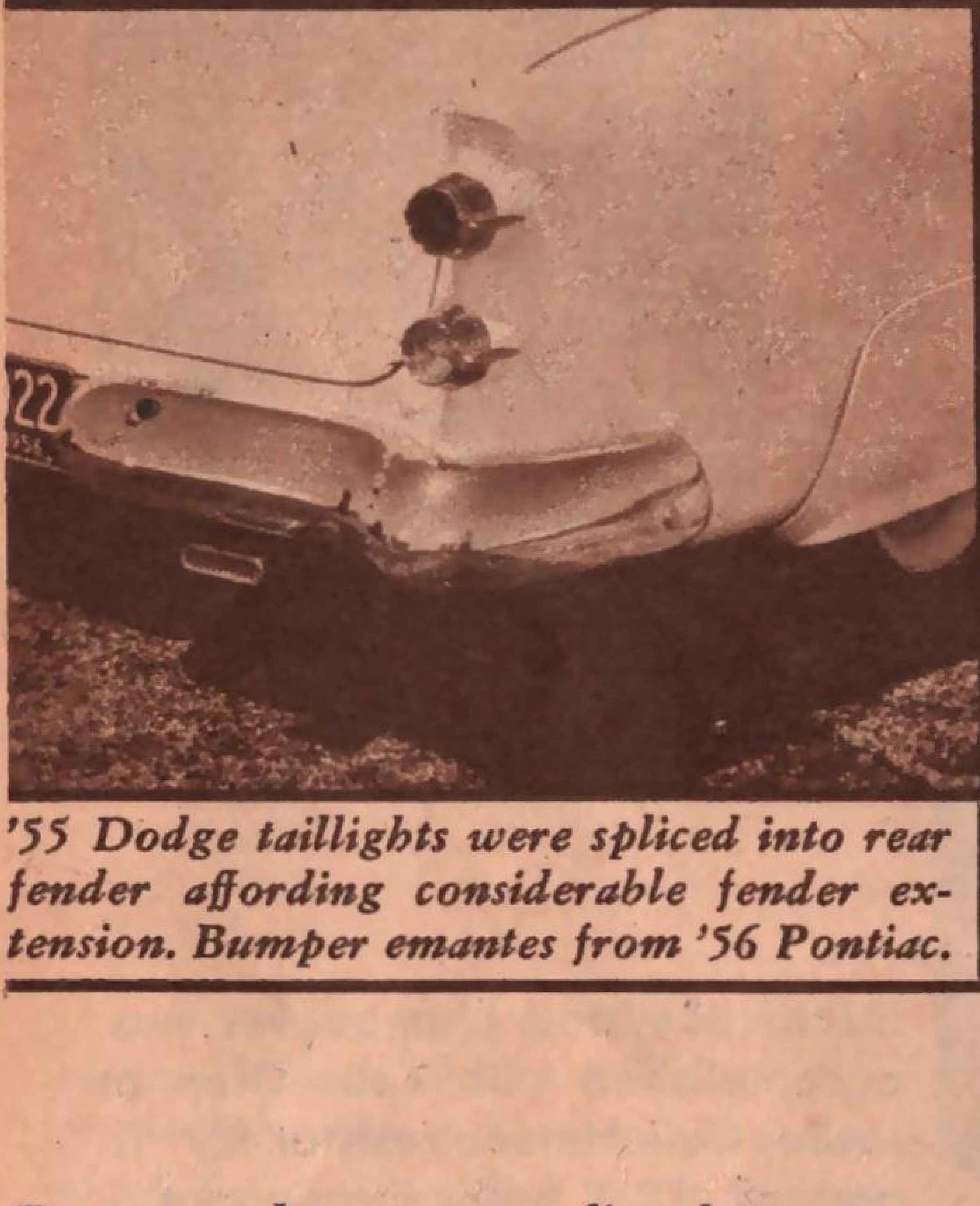
Electrical system changeover was accomplished with Volta-Drop on radio, Cole Hersee resistor for gauges, 12-V bulbs throughout. Generator was relocated from lower left side of engine to top, using fabricated strap-steel brackets.

SCINTILATING CHEV

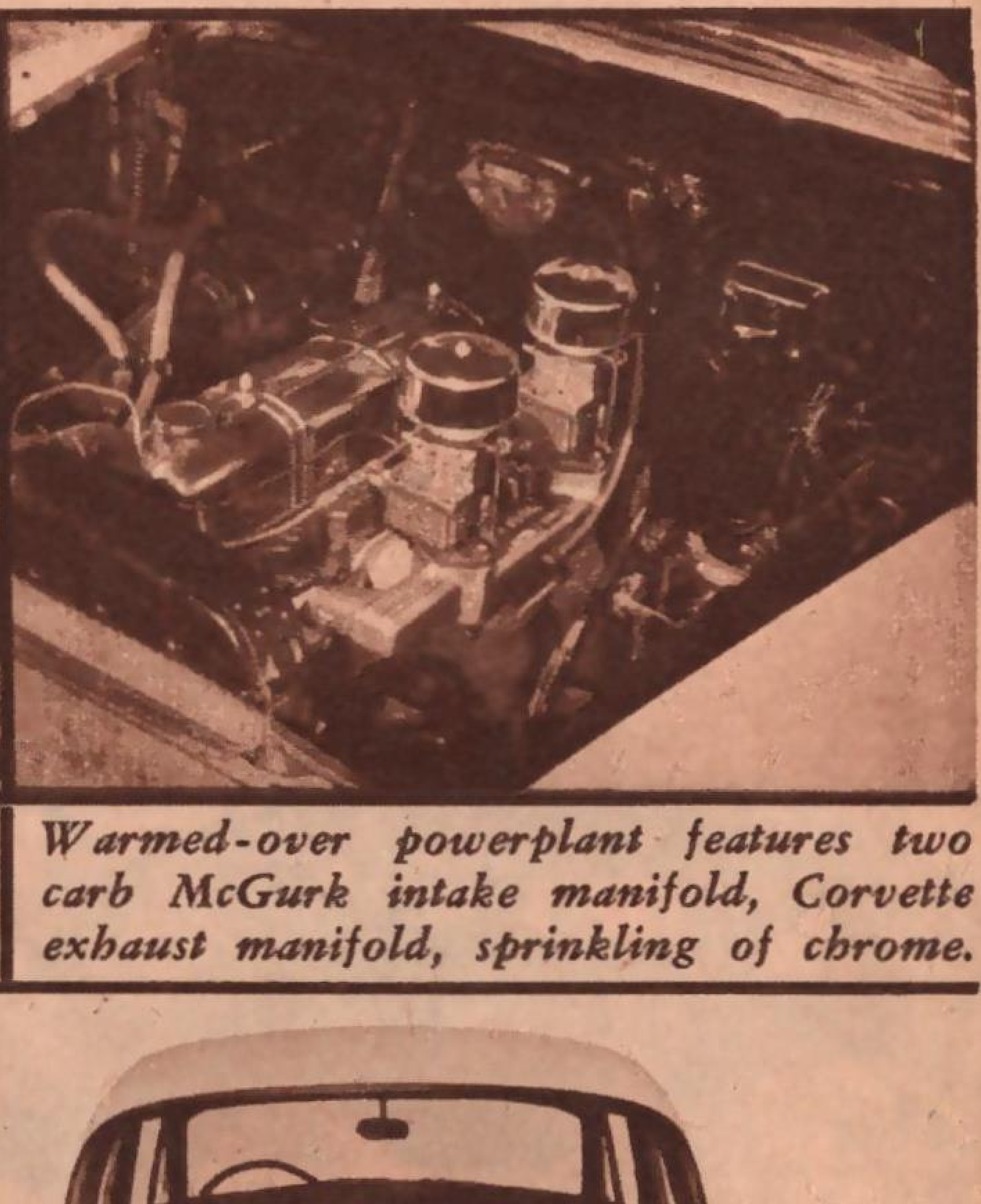
FROM JALOPIES TO CUSTOMS—OHIO ENTHUSIAST TURNS FROM TRACK SIDE TO SHOW CIRCUIT



Scooped skirts are one of the many highlights gracing Wayne Ludmas' cleverly disguised '54 Chevy custom. Merc skirts were used as a starter for innovation.

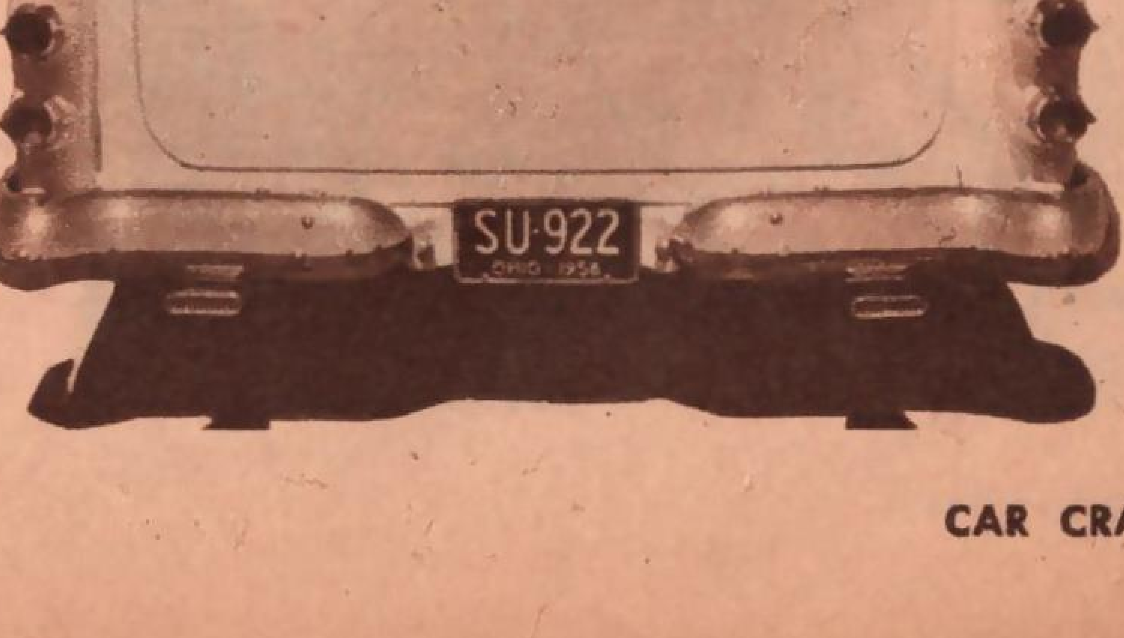


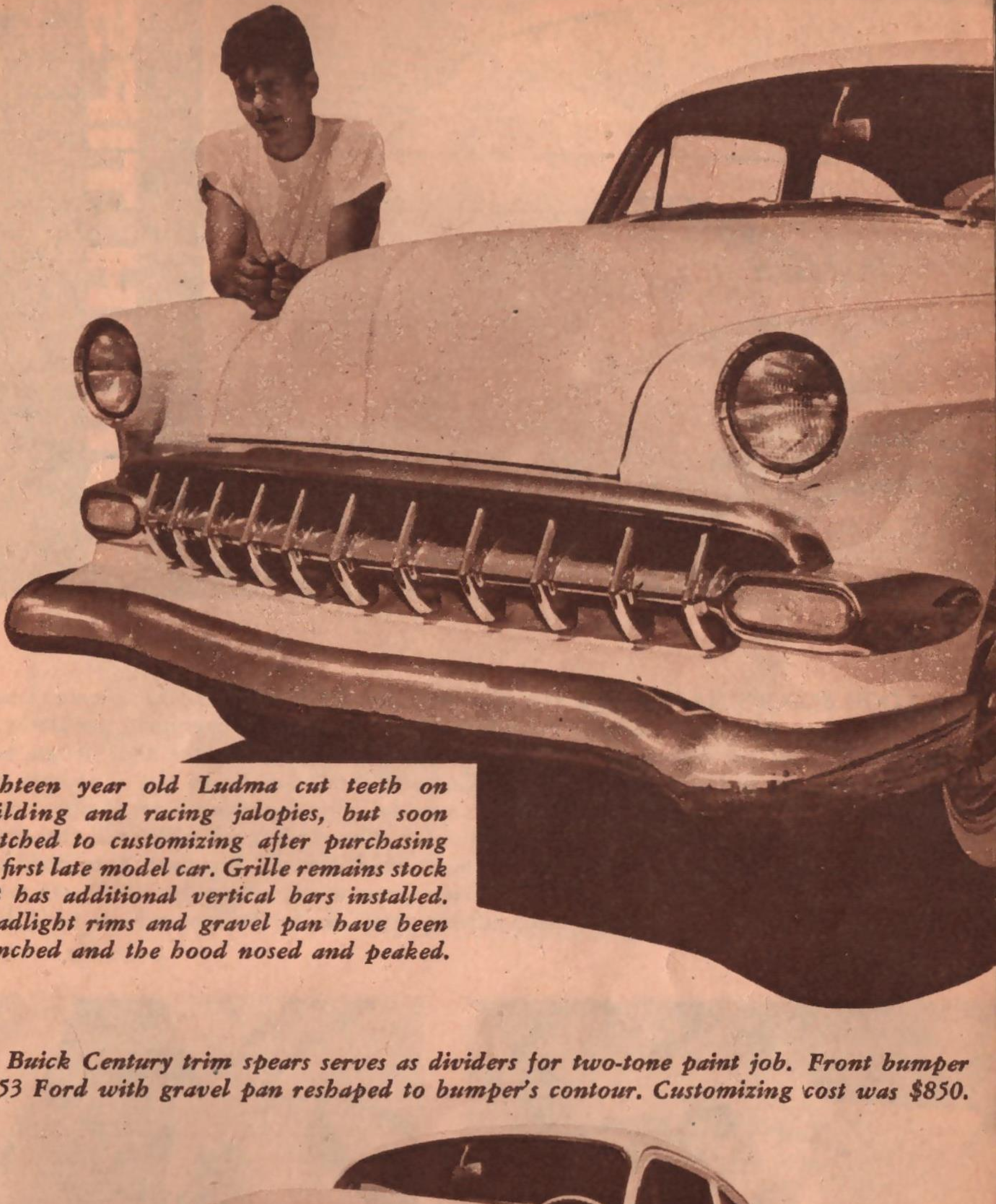
'55 Dodge taillights were spliced into rear fender affording considerable fender extension. Bumper emantes from '56 Pontiac.



Warmed-over powerplant features two carb McGurk intake manifold, Corvette exhaust manifold, sprinkling of chrome.

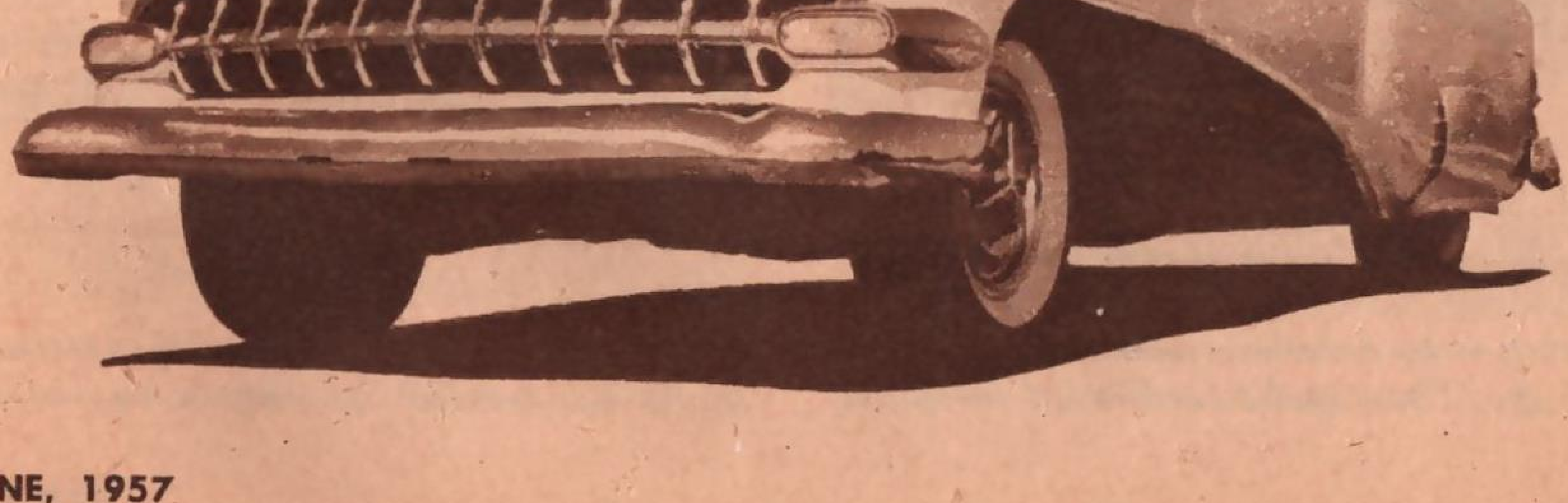
Rear gravel pan was relieved in center to conform to two piece '56 Pontiac bumper. Body is dropped moderate two inches.

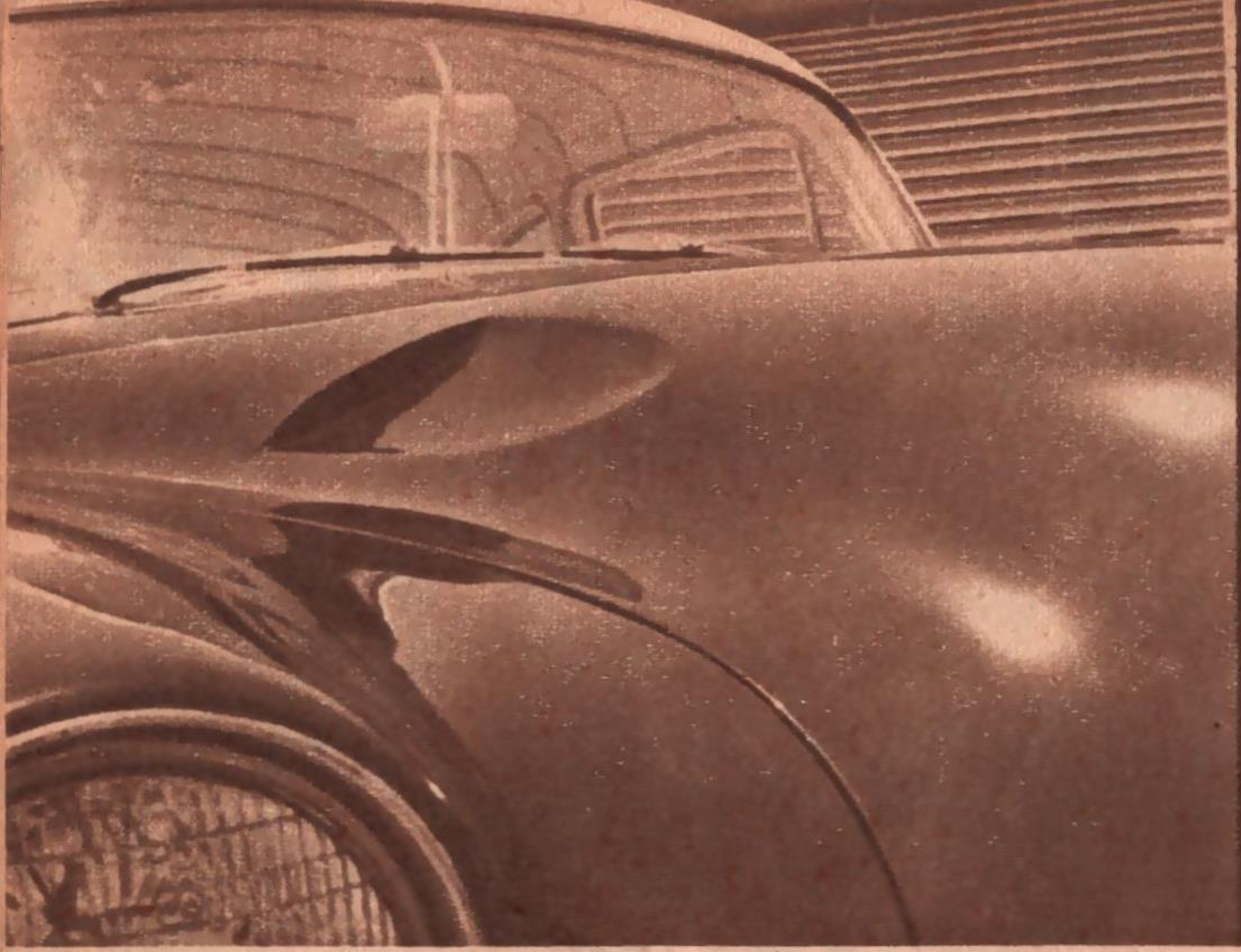




Eighteen year old Ludma cut teeth on building and racing jalopies, but soon switched to customizing after purchasing his first late model car. Grille remains stock but has additional vertical bars installed. Headlight rims and gravel pan have been frenched and the hood nosed and peaked.

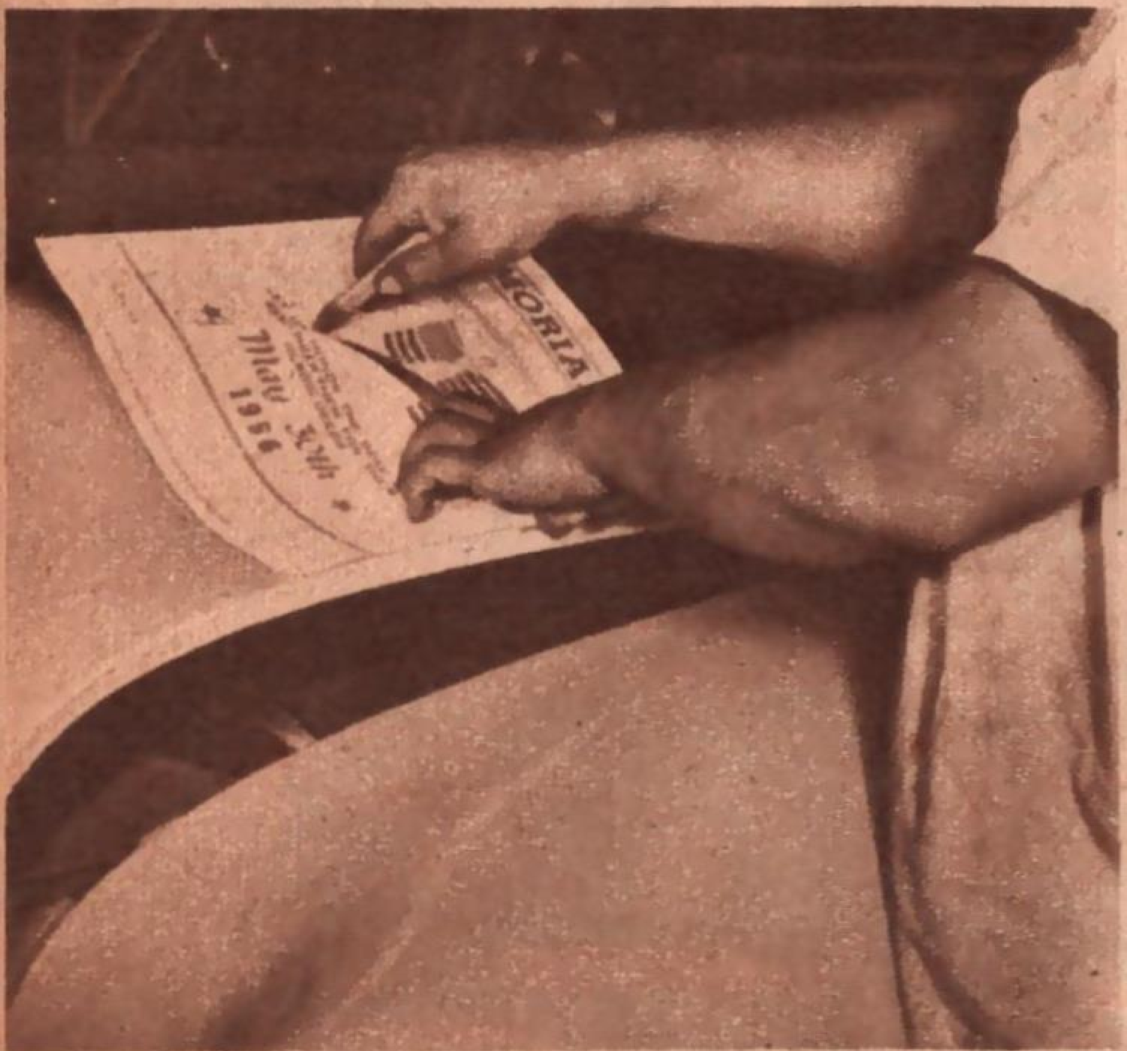
'55 Buick Century trim spears serves as dividers for two-tone paint job. Front bumper is '53 Ford with gravel pan reshaped to bumper's contour. Customizing cost was $850.



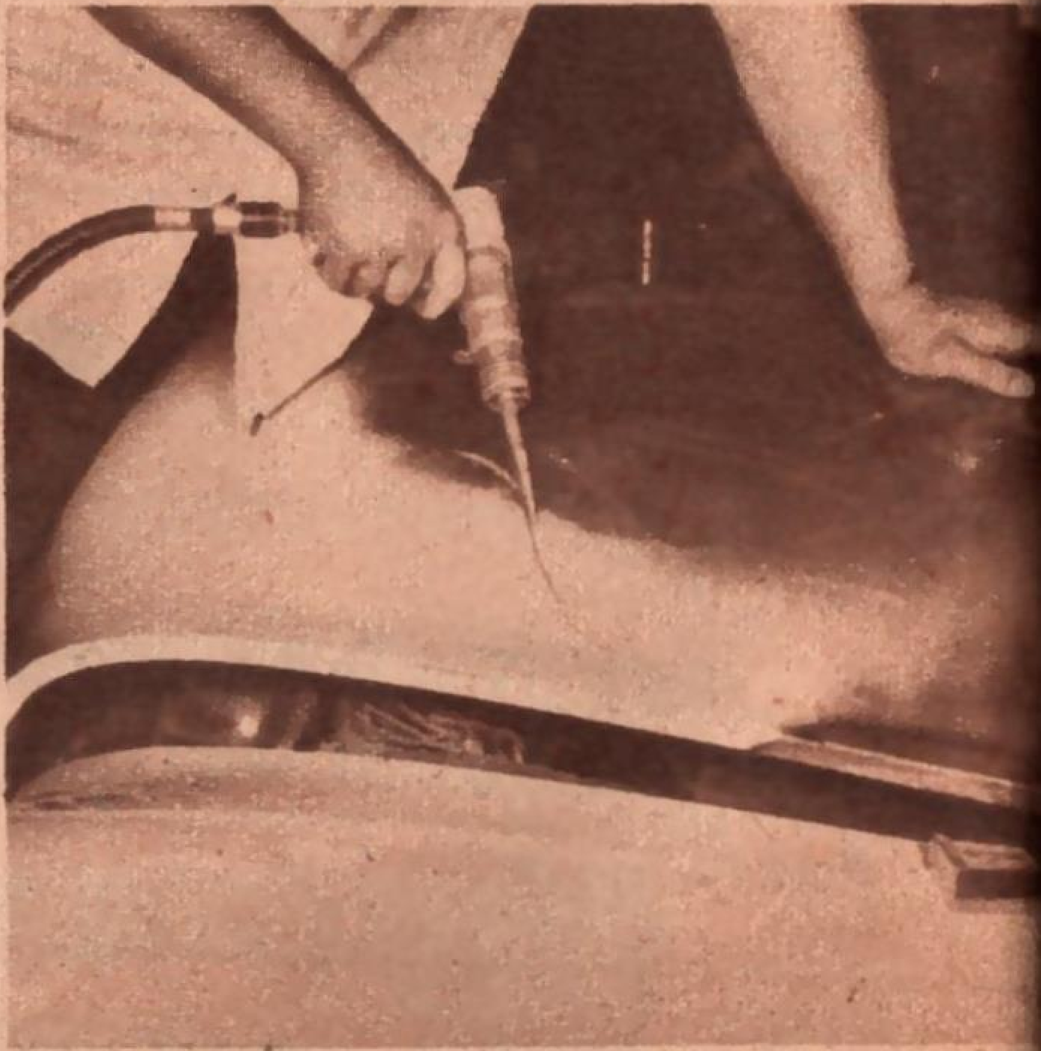


TORCH TIPS

HOOD SCOOPS HAVE been a part of customizing for many years, but it wasn't until the '52 Mercurys were introduced that this innovation sprang to over-night popularity. The Merc, with their *falsie* stamped bonnets, were a natural for the scooped hood design, but for other custom car enthusiasts who wish to follow suit with other model cars — another styling idea had to be devised. That concept is found on the following pages — small scoops that are hewn into the sides of the hood and the openings usually trimmed out with small chrome teeth. Work for this particular feature emanates from Robbie Martinez' Broadway Auto Body located in Chula Vista, California. An early '49-'51 Merc serves as the subject, but as you can see from accompanying sample photographs many different styles can be incorporated into hood designs.



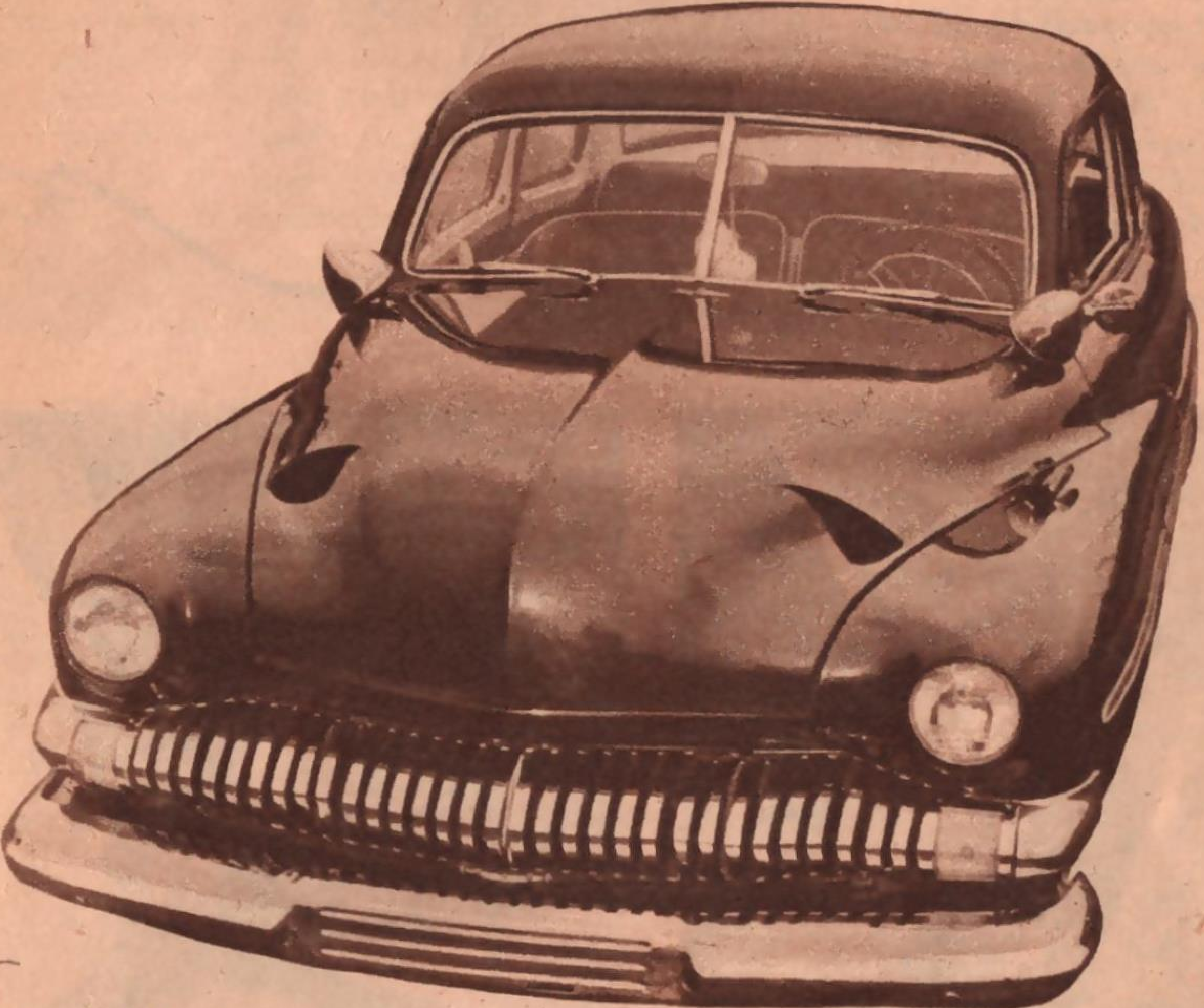
First step is to determine position of scoop and shape. Then make cardboard template.



After design and position is determined, use a hand-chisel or airgun to cut hood.

HOOD SCOOPS

A stylish innovation for the current custom car



Photos by Bob Hardee

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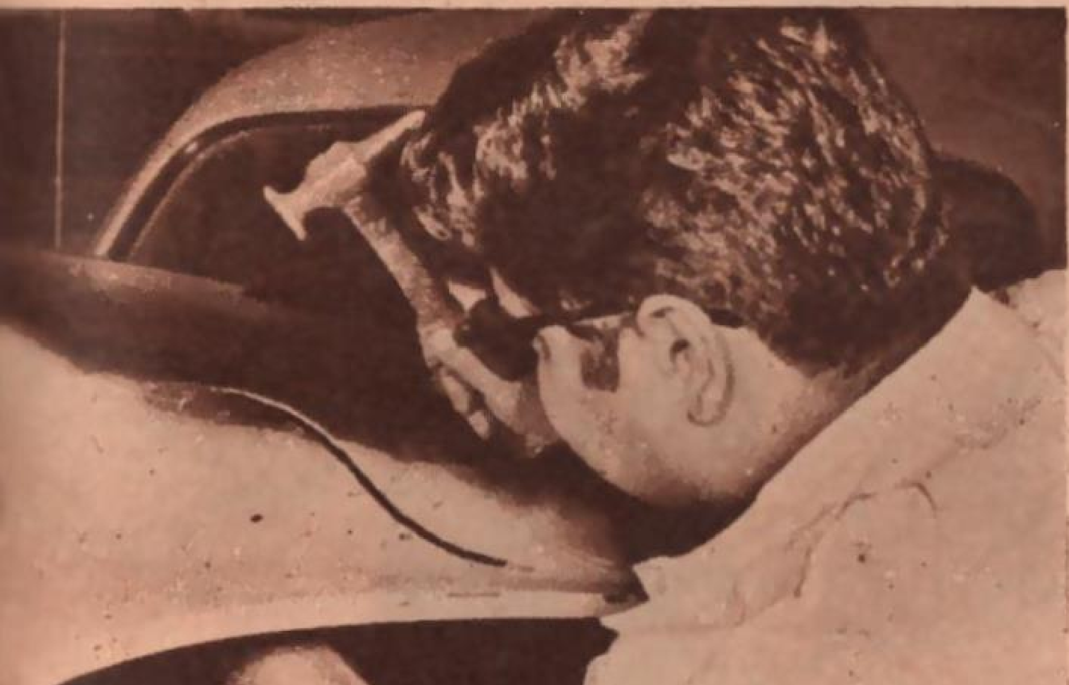
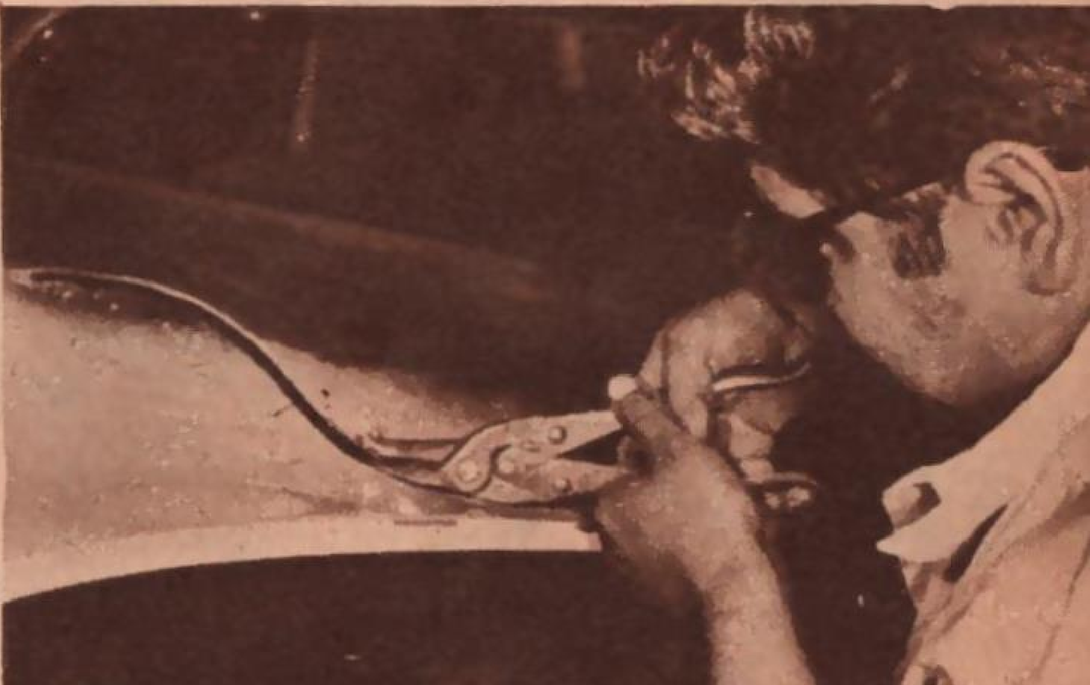


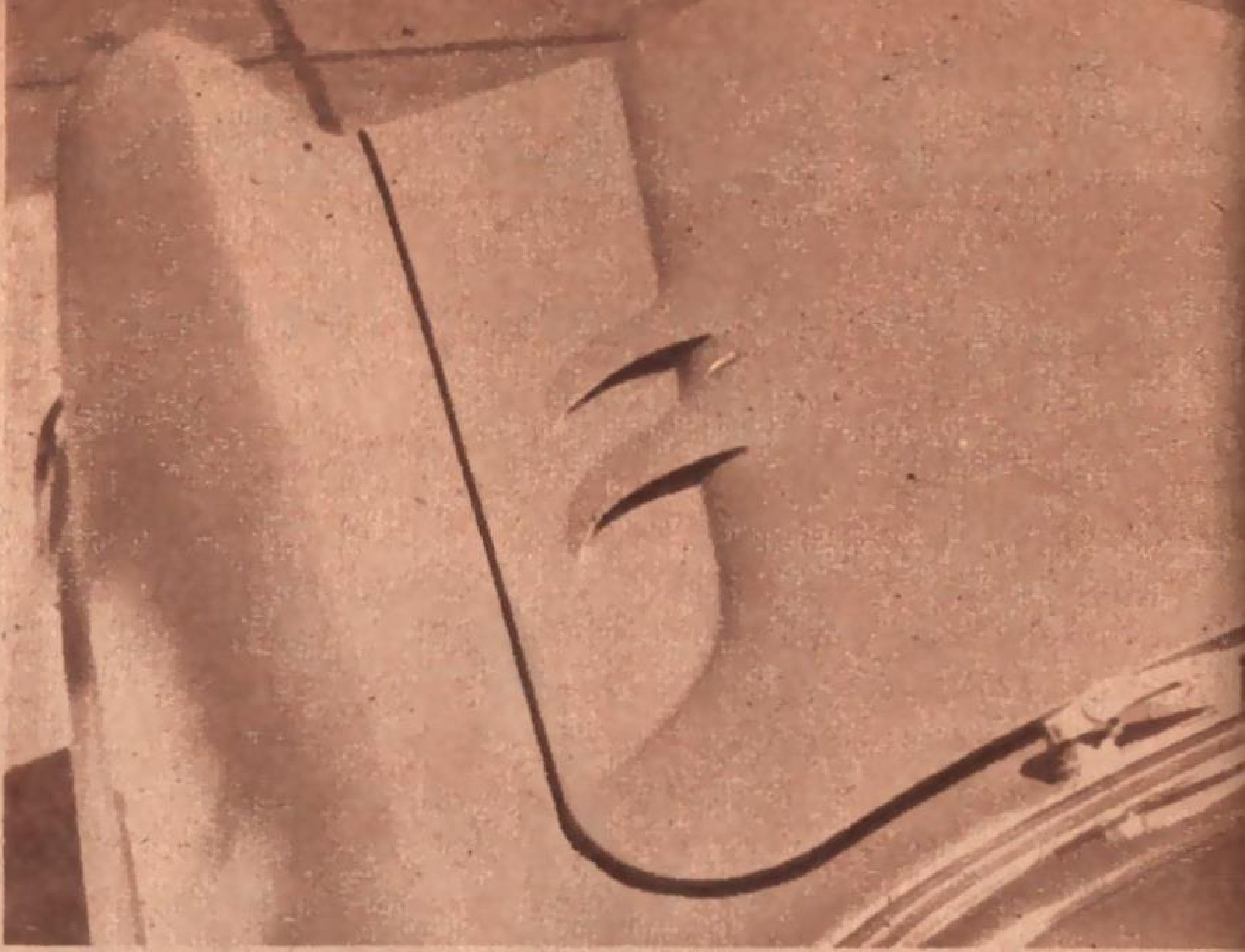
Area just forward of opening now is pounded down using dolly and hammer.



After the opening has been enlarged slightly, then trim metal edge with tin snips.

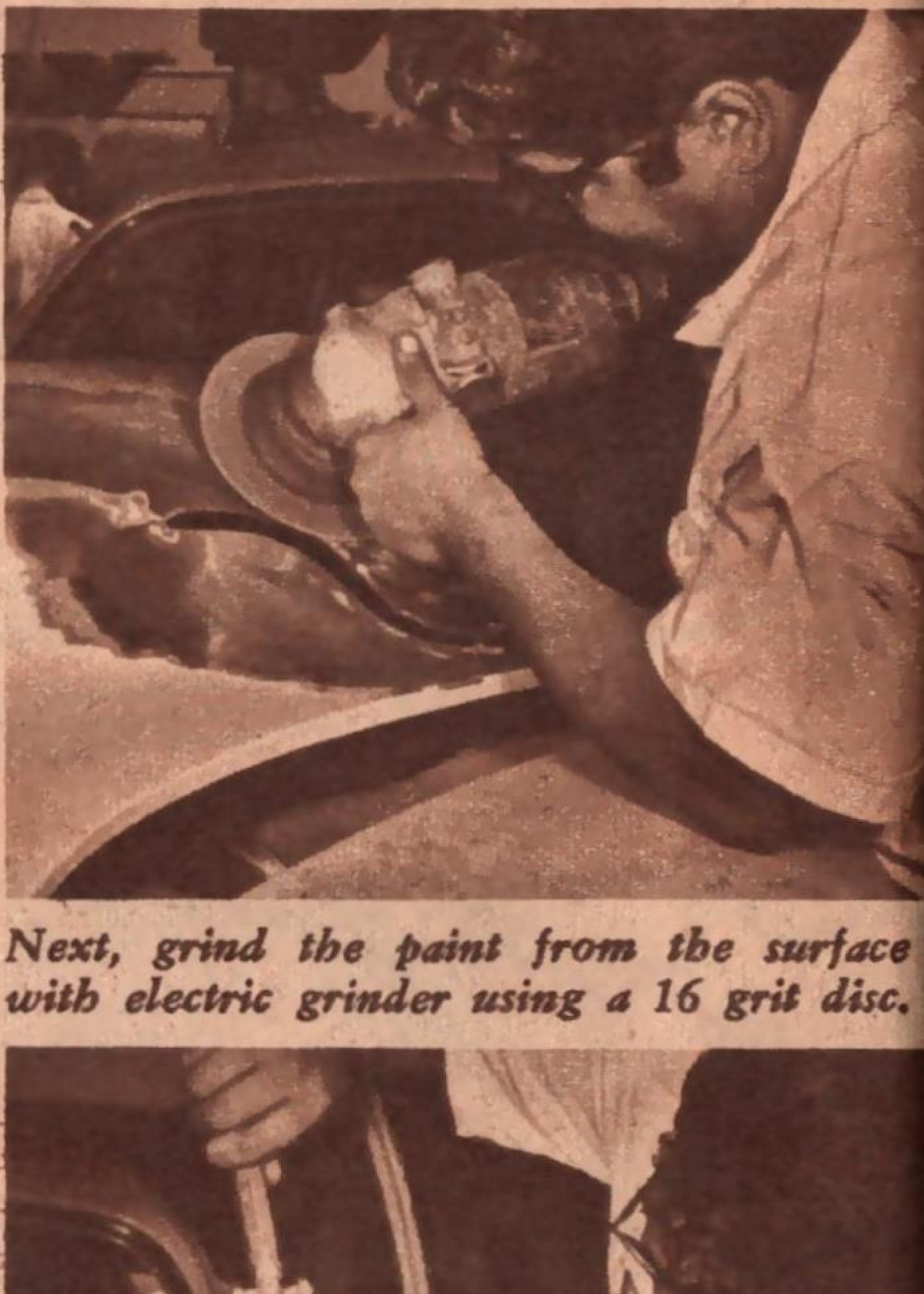
HOOD SCOOPS

continued



Novel design can be found on this hood. Two small dorsal side protrusions are blended with stock '52-'54 Merc hood. Openings face rearward. This same style could be worked into other hoods with little effort. Additional protrusions could also be incorporated in design.

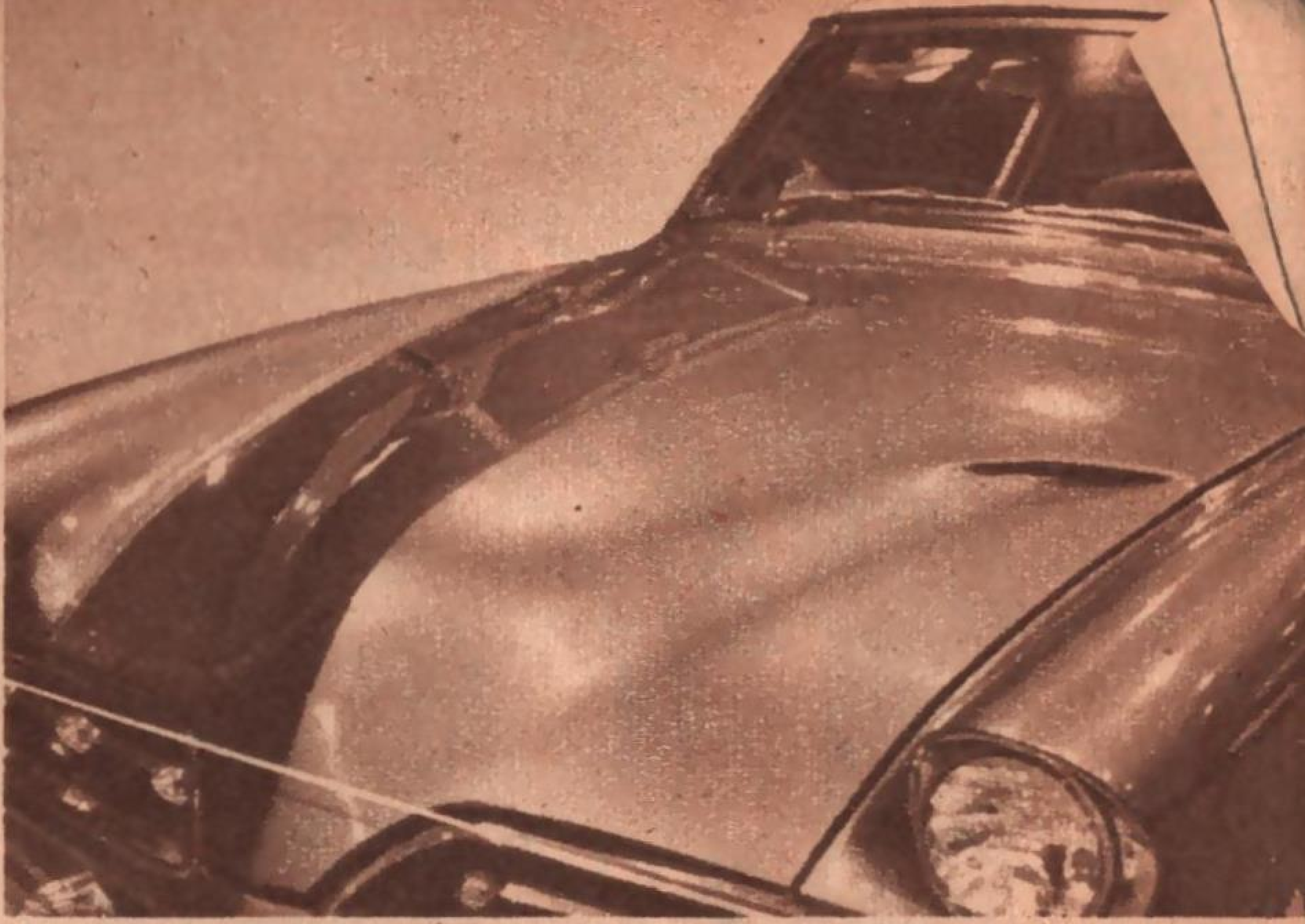
From underneath hood, forward edge is rolled under. Use dolly and a hammer.



Next, grind the paint from the surface with electric grinder using a 16 grit disc.

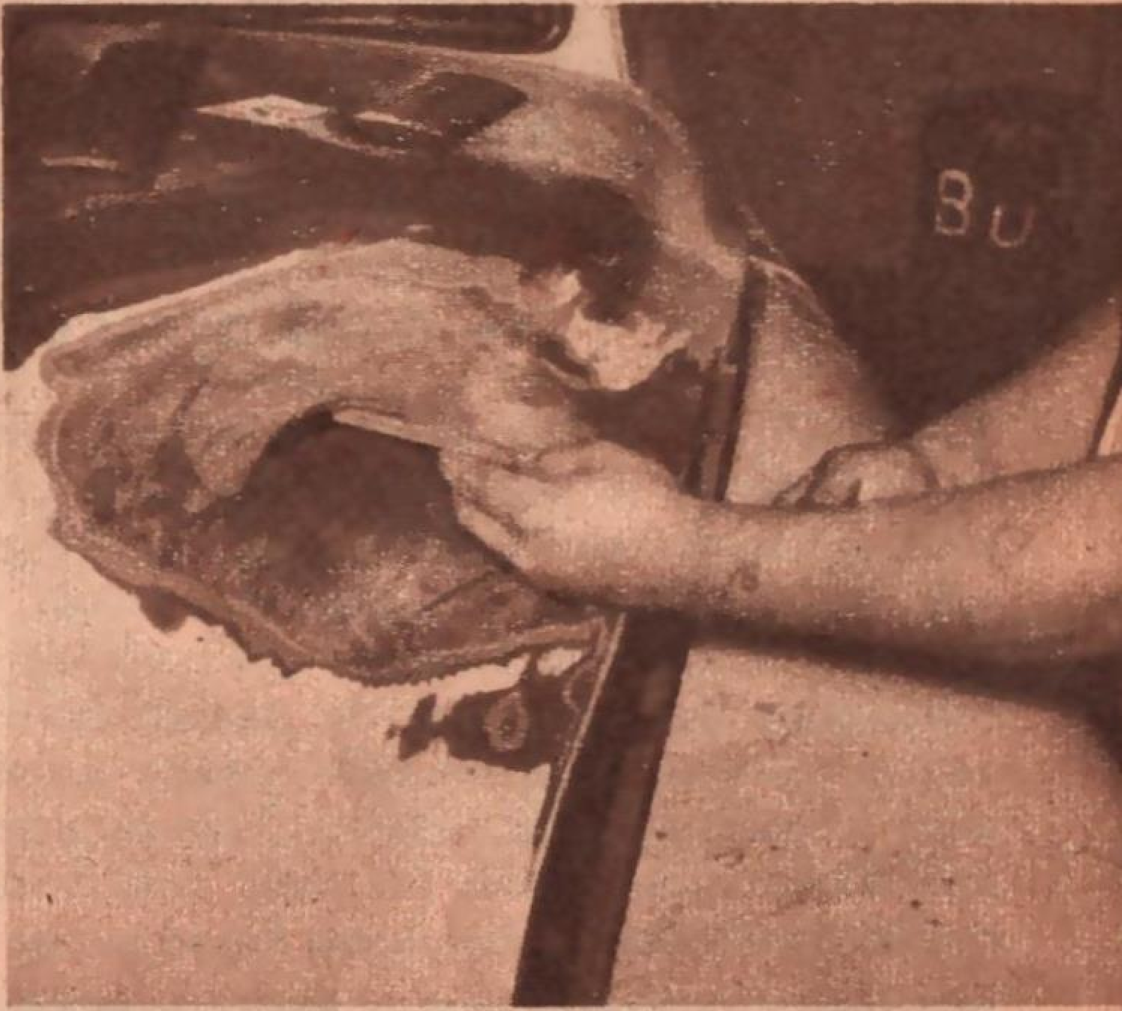
Tin surface thoroughly, then melt on stick-lead, contouring with the lead paddle.

Surface is now hand filed to perfection using hand file. Then also file opening.



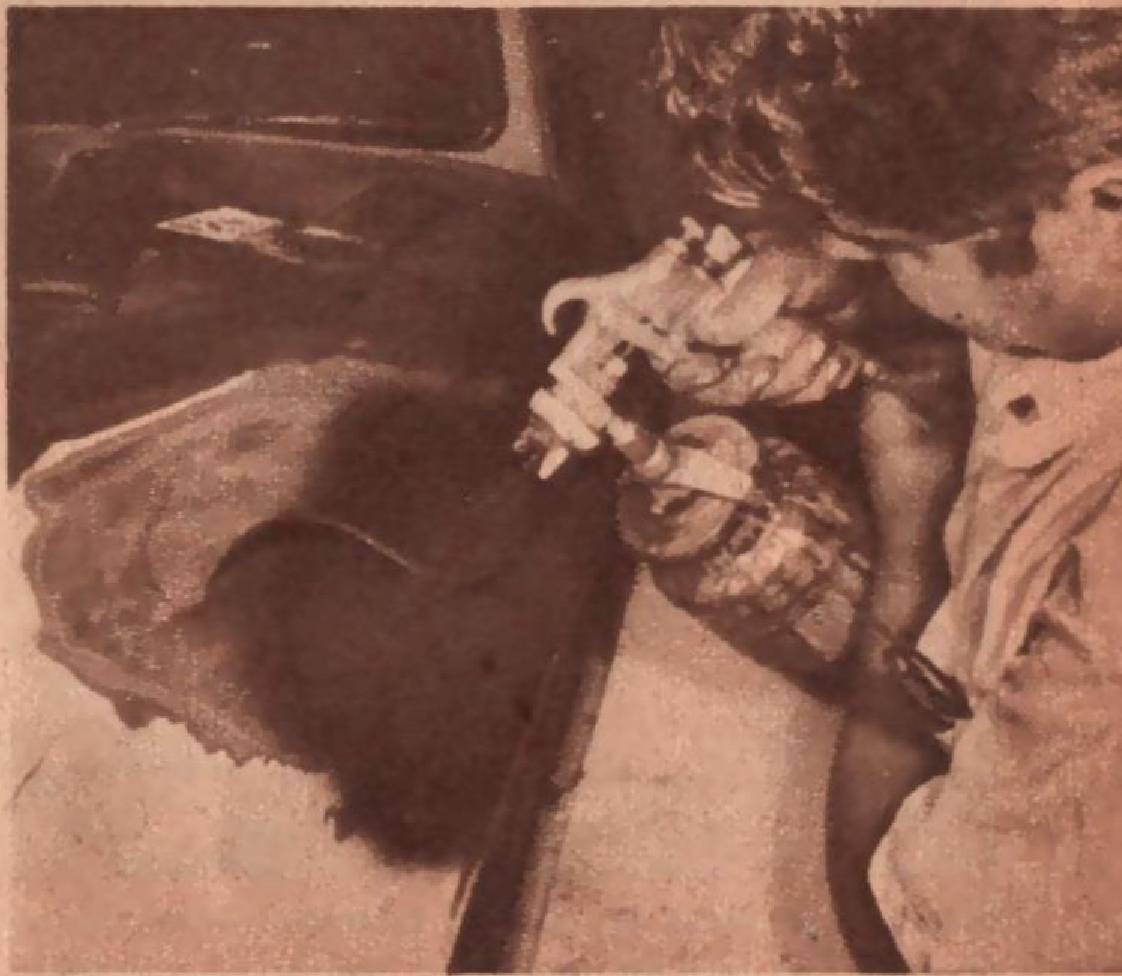
Common pracitce has been to just raise the opening along the outside edge of hood such as you see here on this late Studebaker. Many times, builders add to the hood scoop's appearance by installing small chrome teeth procured from rear fenders of Mercurys, Chevrolets and Cads.

A small section of round rod is then cut to fit along the upper lip of the opening.



Bend rod to conform to shape of opening, and then braze it solidly to the hood.

Working area is sanded thoroughly with sandpaper, then apply the metal prep.



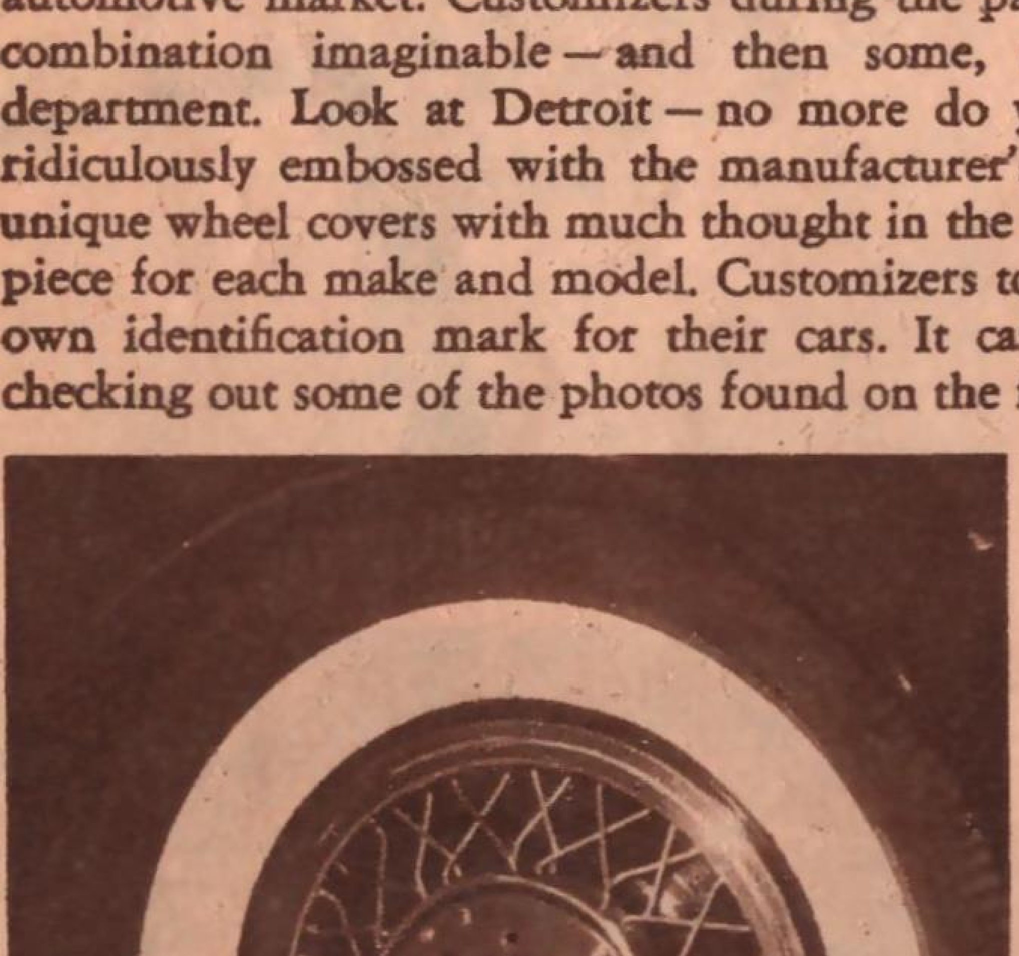
Surface is now primed, blocksanded, then sprayed with the final finish color paint.

GRAB BAG:

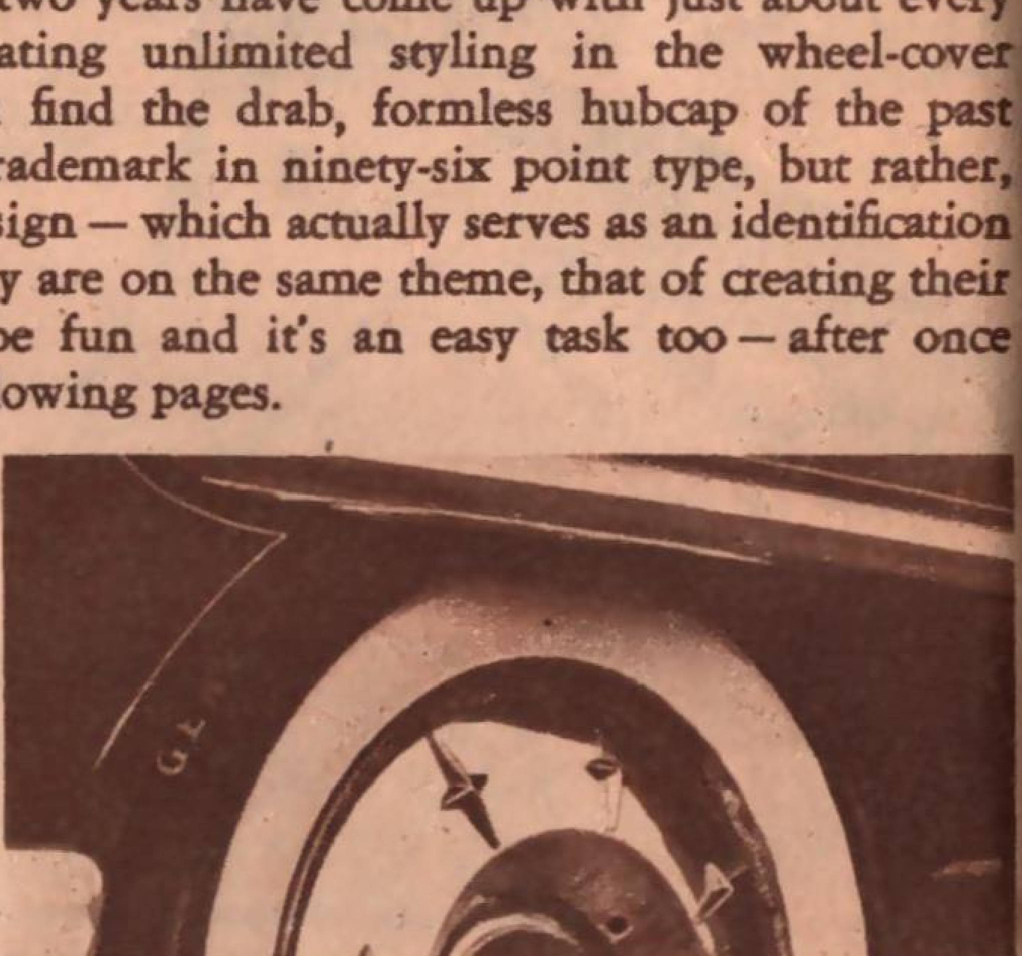
SPINNERS FLIPPERS KNOCK-OFF LUGS

— add special flavor to custom hubcaps

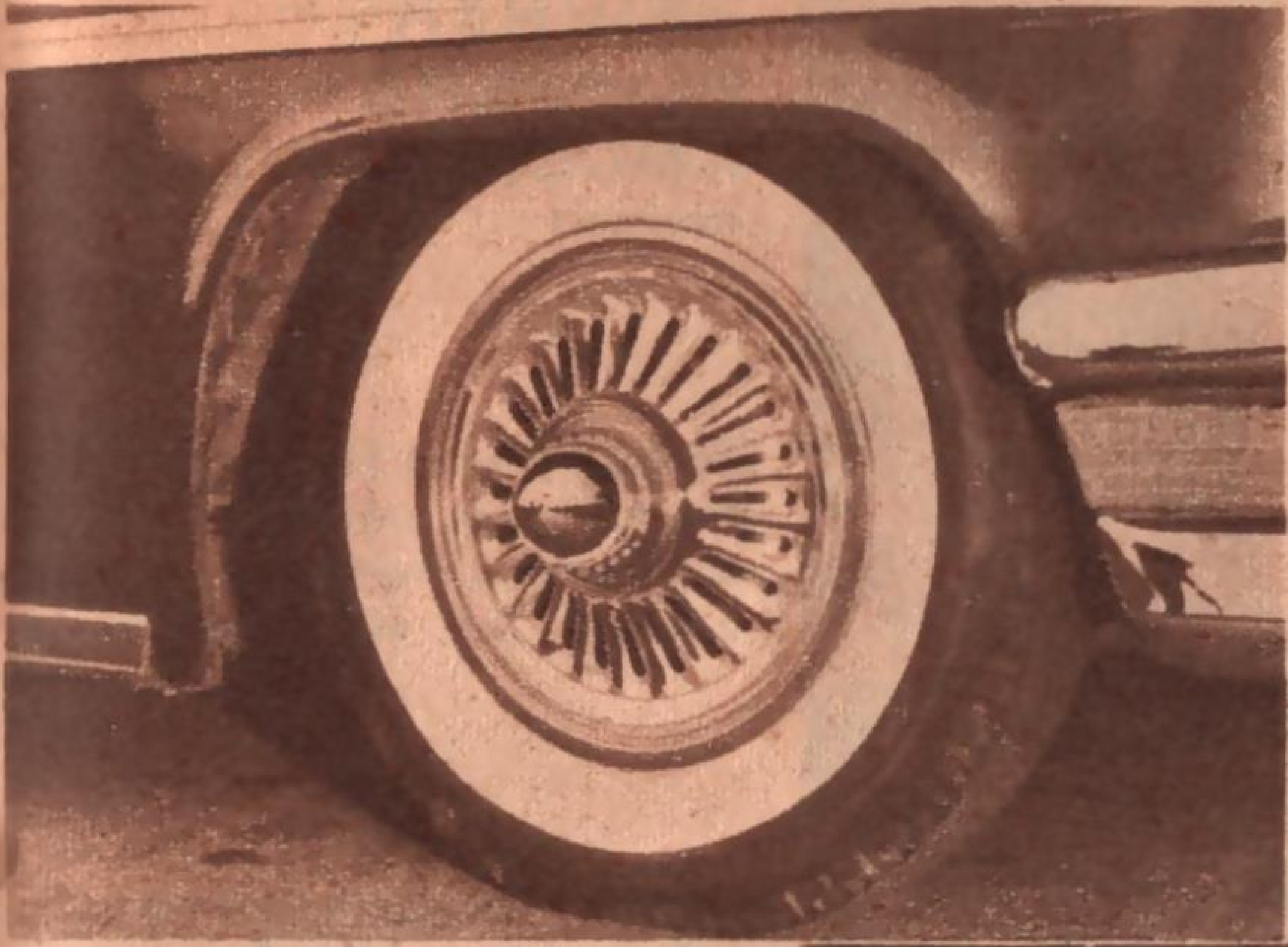
IT'S QUITE AMAZING what can be accomplished in appearance by blending miscellaneous components to some of the standard brand and accessory hubcaps that are now on the automotive market. Customizers during the past two years have come up with just about every combination imaginable — and then some, creating unlimited styling in the wheel-cover department. Look at Detroit — no more do you find the drab, formless hubcap of the past ridiculously embossed with the manufacturer's trademark in ninety-six point type, but rather, unique wheel covers with much thought in the design — which actually serves as an identification piece for each make and model. Customizers today are on the same theme, that of creating their own identification mark for their cars. It can be fun and it's an easy task too — after once checking out some of the photos found on the following pages.



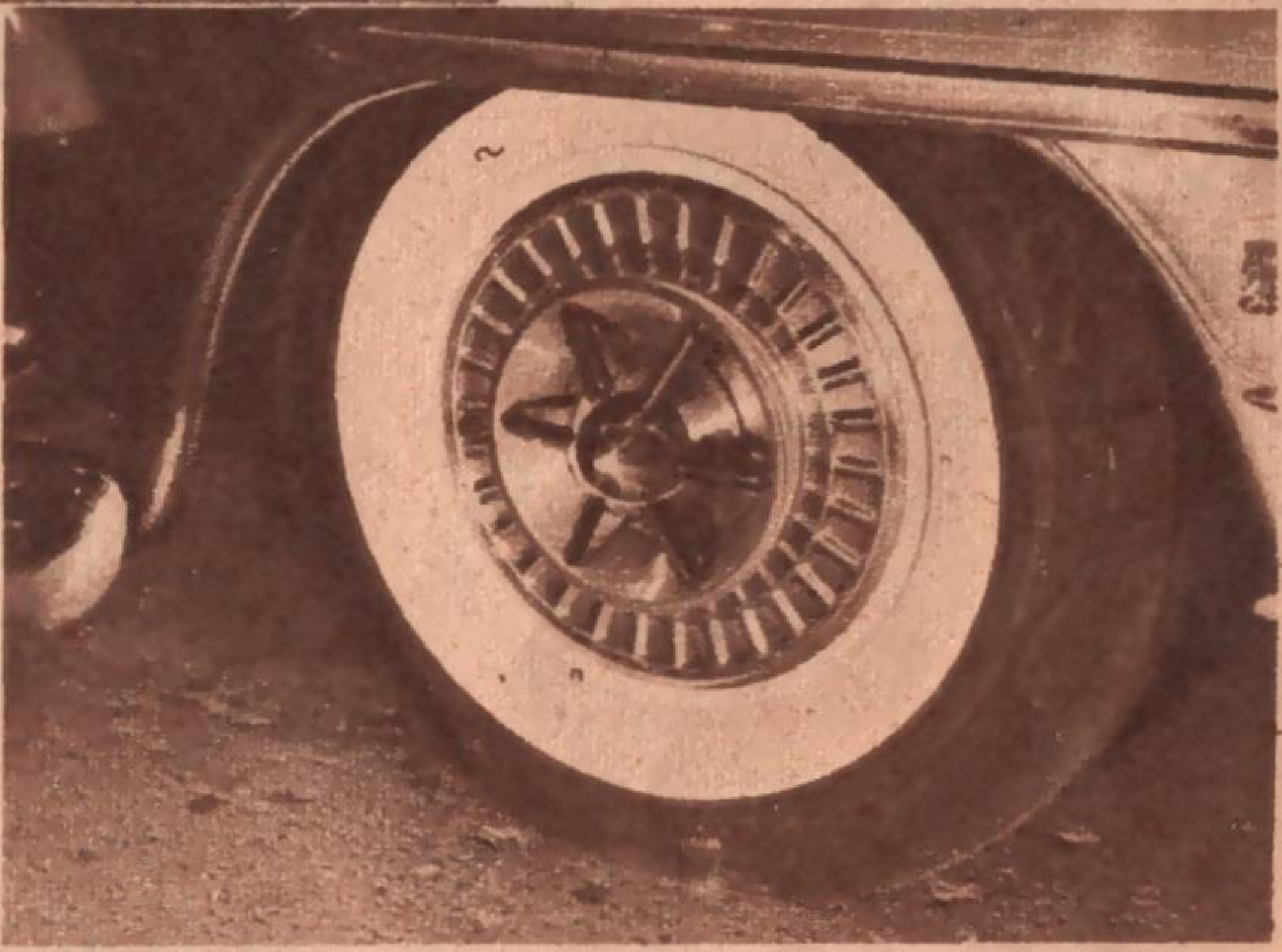
If wire wheels are your choice, then many of the accessory snap-on types work fine. The center piece — a drilled horn cover.



The '53 Cad hubcap has been a favorite for years. Here you see what can be achieved with spinner and '54 Pontiac trim stars.



"Fury" wheel covers, stock or accessory, come on real strong with center spinner. Center piece here is from unknown bumper guard or spotlight shell, both are frequently used.



Originality is quite obvious in this '57 Chrysler cover with Eastern Auto's center spinner and blade accessory kit. Installation of this hubcap kit was covered in the Sept. '56 issue.

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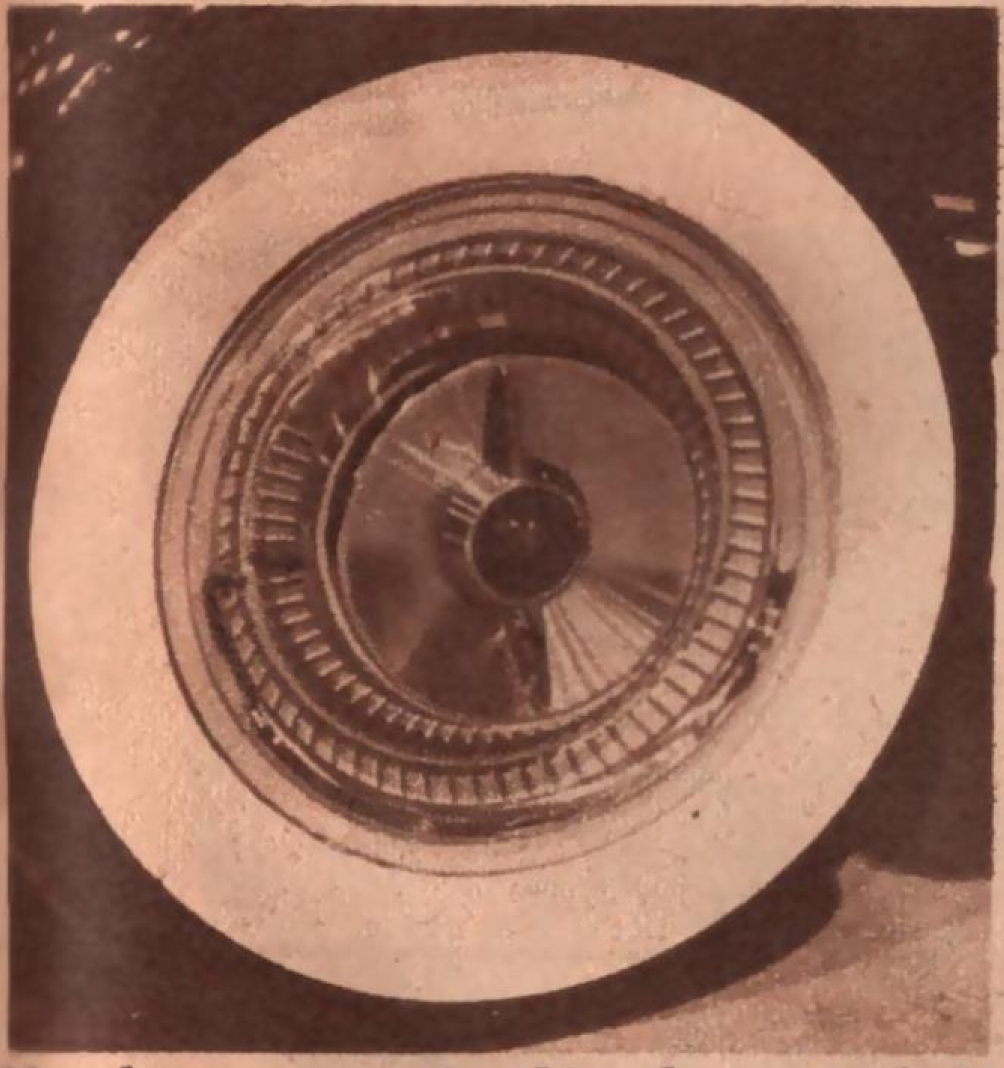
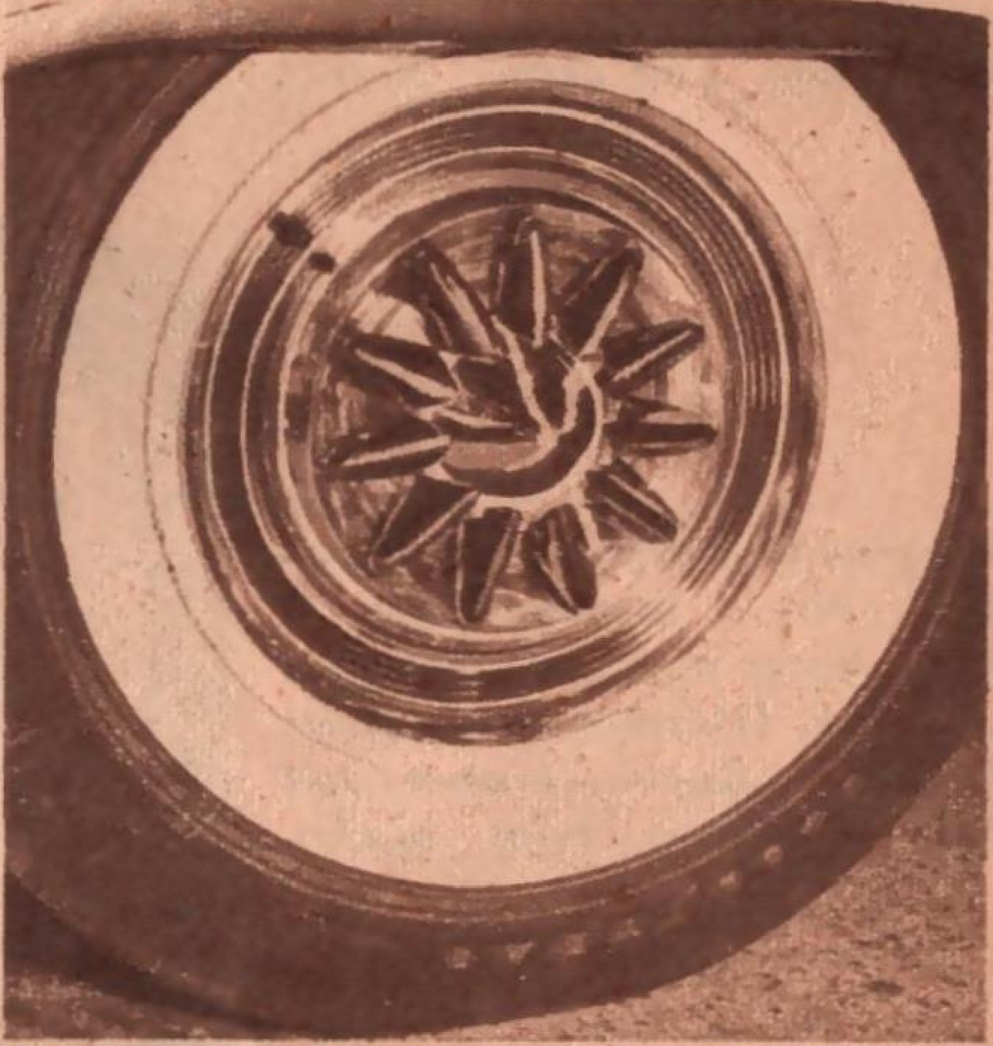


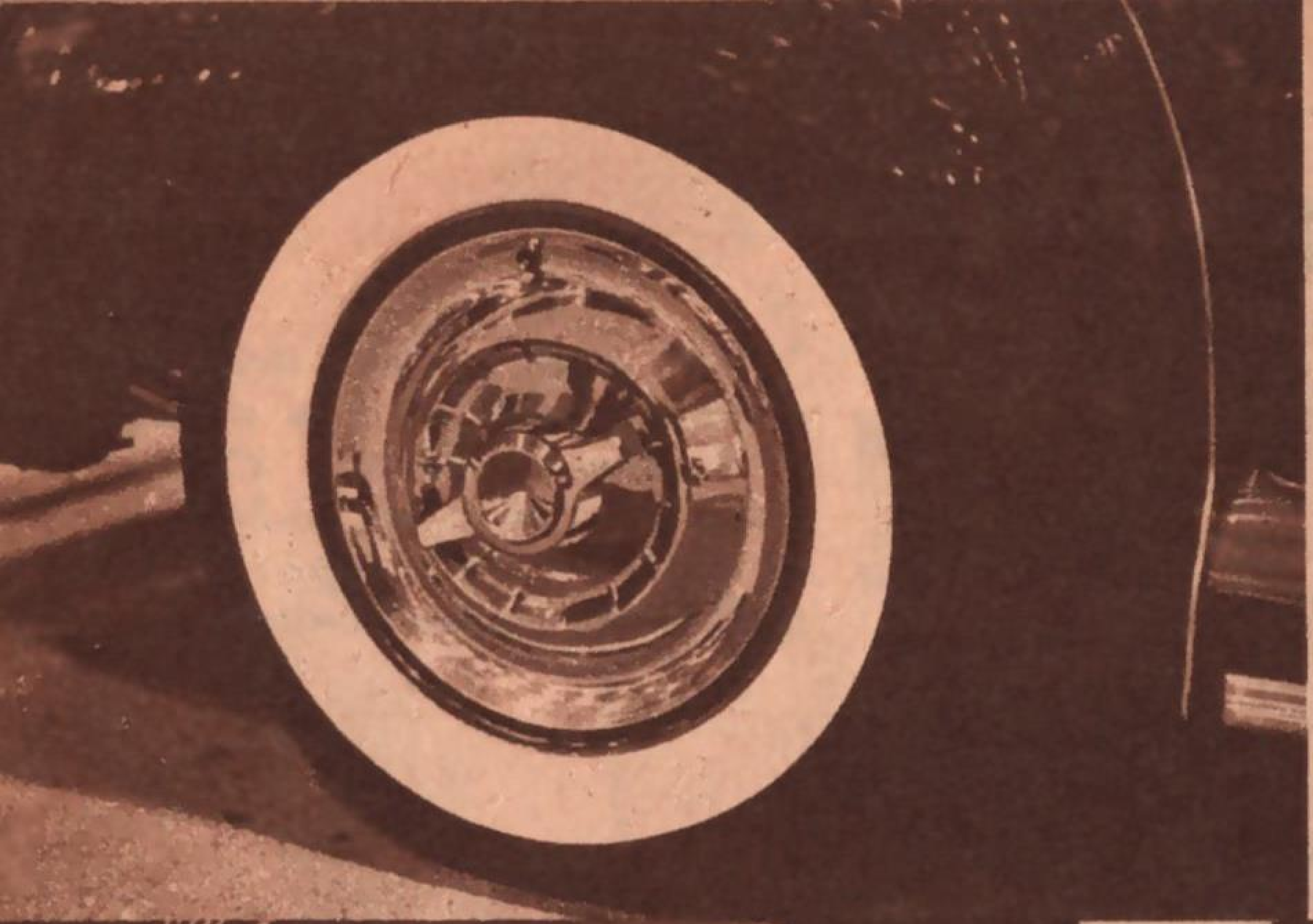
Novel treatment is this clearance light center piece with cross blade. Hubcap is '55 Buick — one of the most popular used.



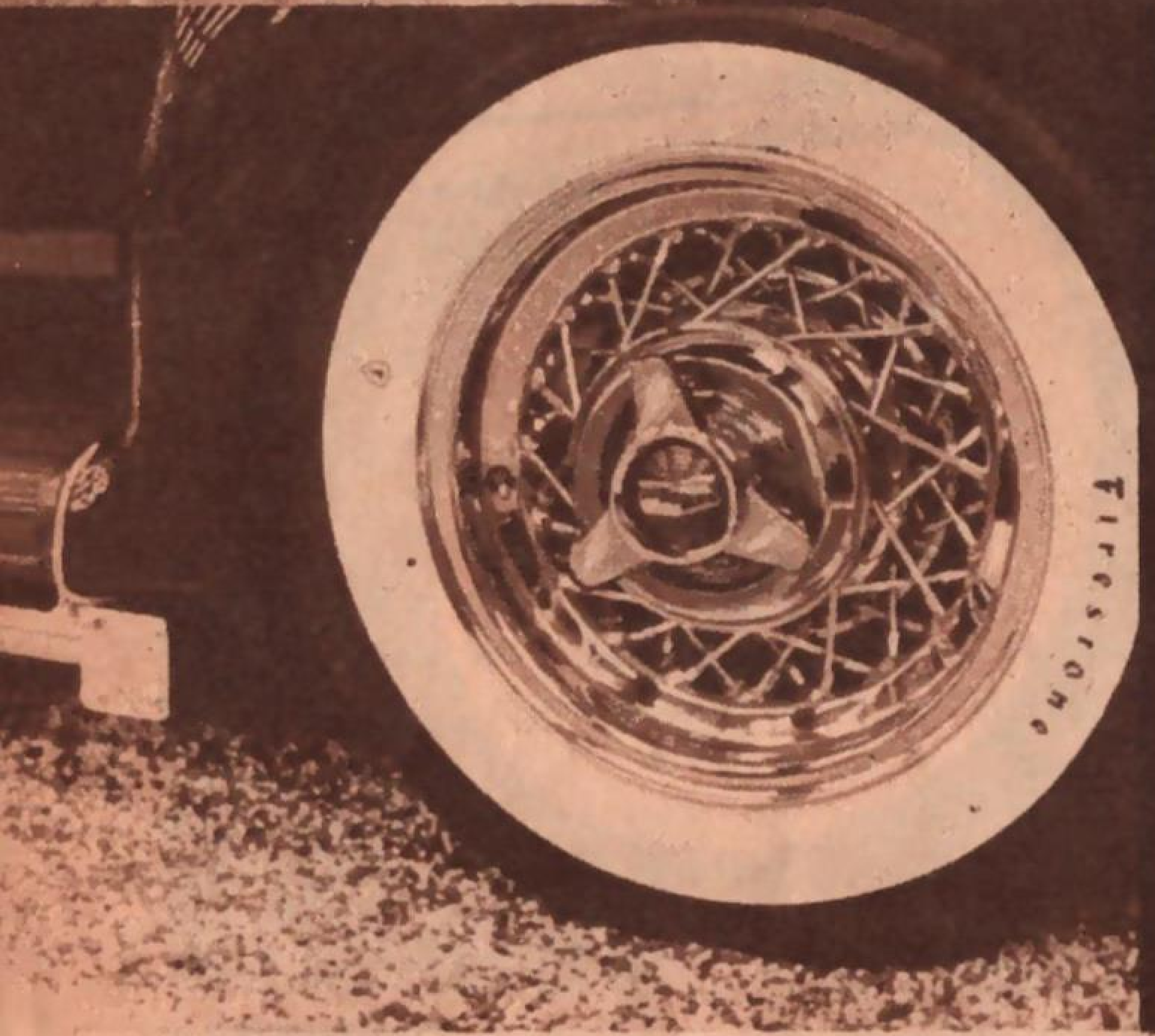
'57 Oldsmobile cap serves as background for this accessory spinner and blade kit. Notice that eleven blades are employed.

SPINNERS – FLIPPERS – KNOCK-OFF-LUGS

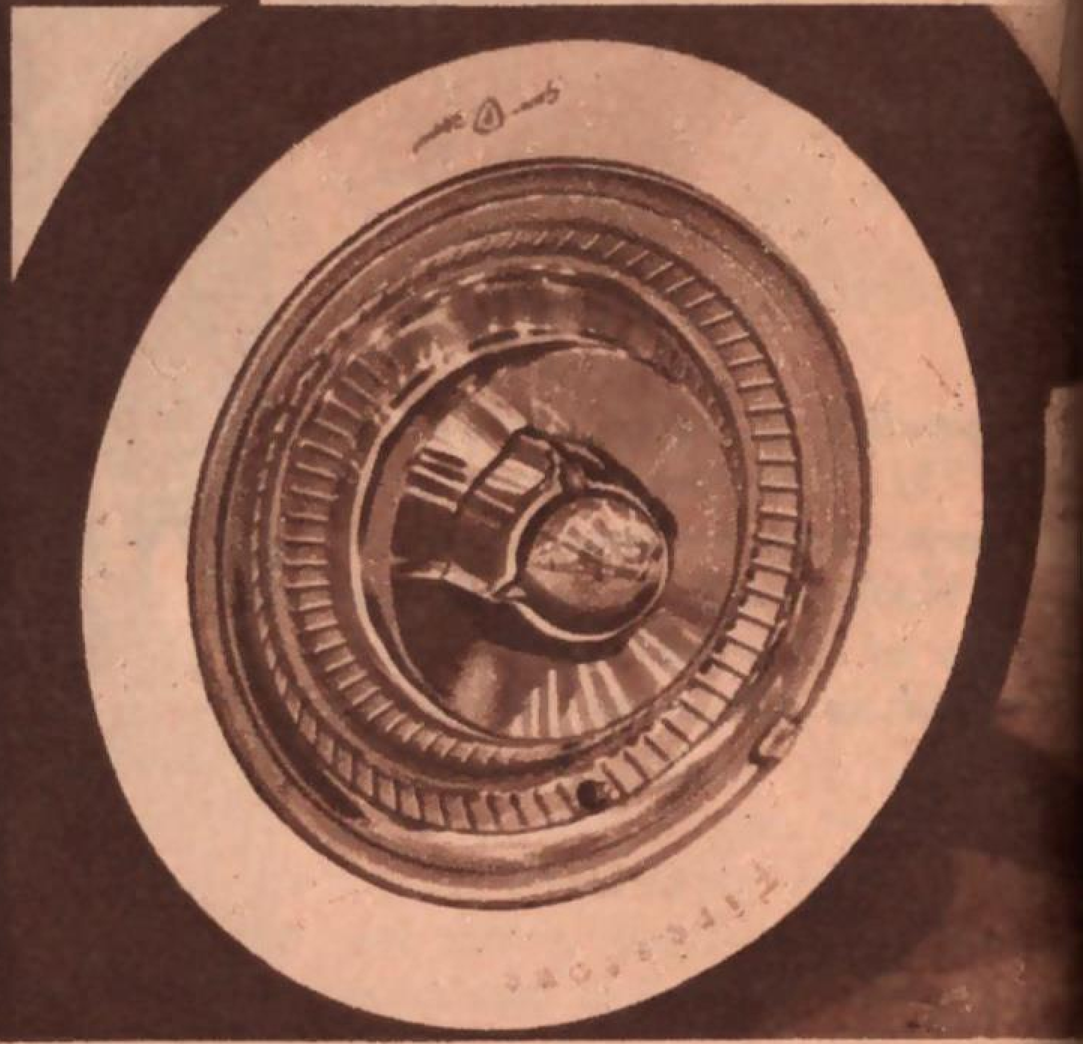
continued



'56 Studebaker knock-off center piece is very popular with the customizers. Here's how it looks with a '54 Mercury cover.

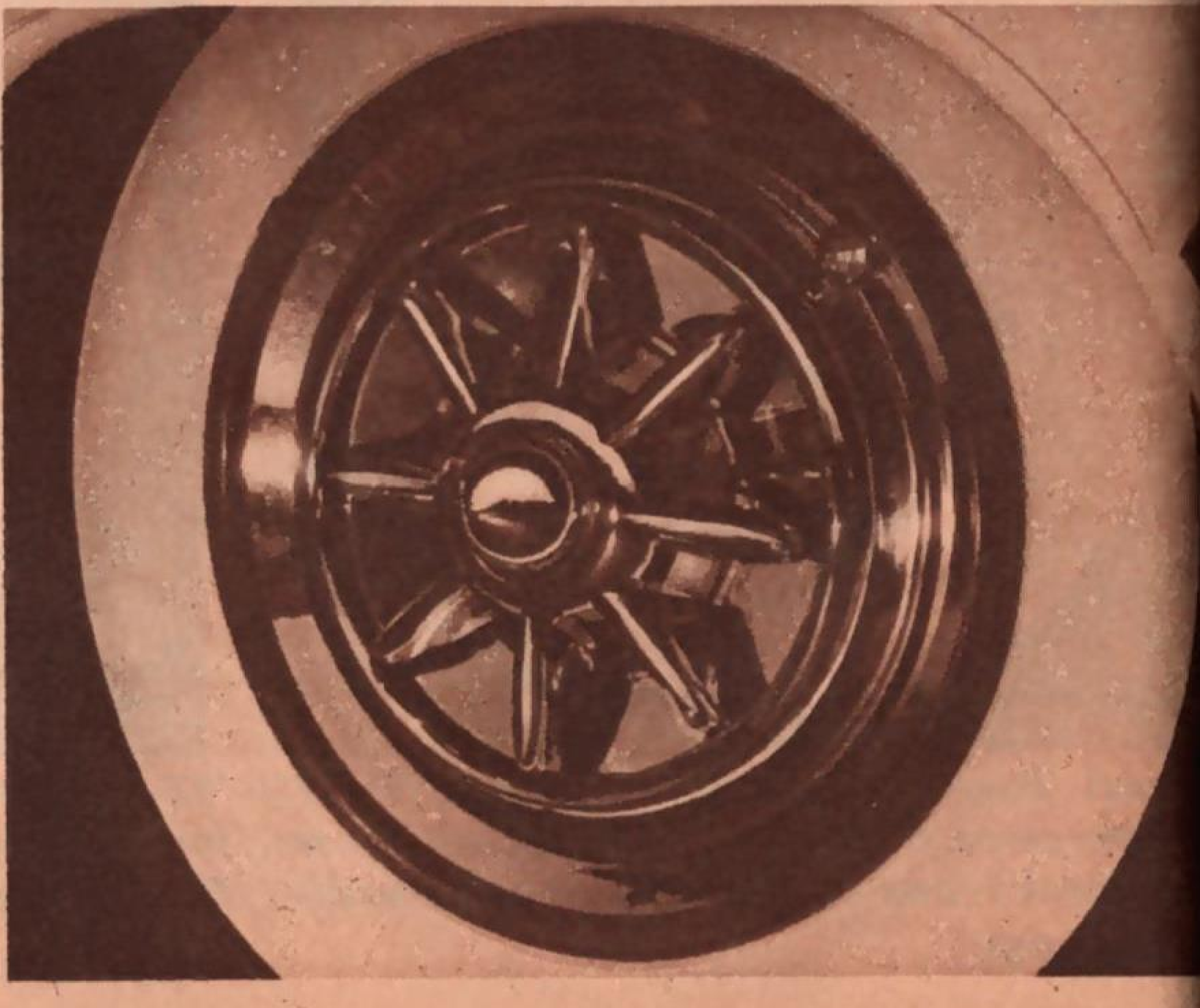


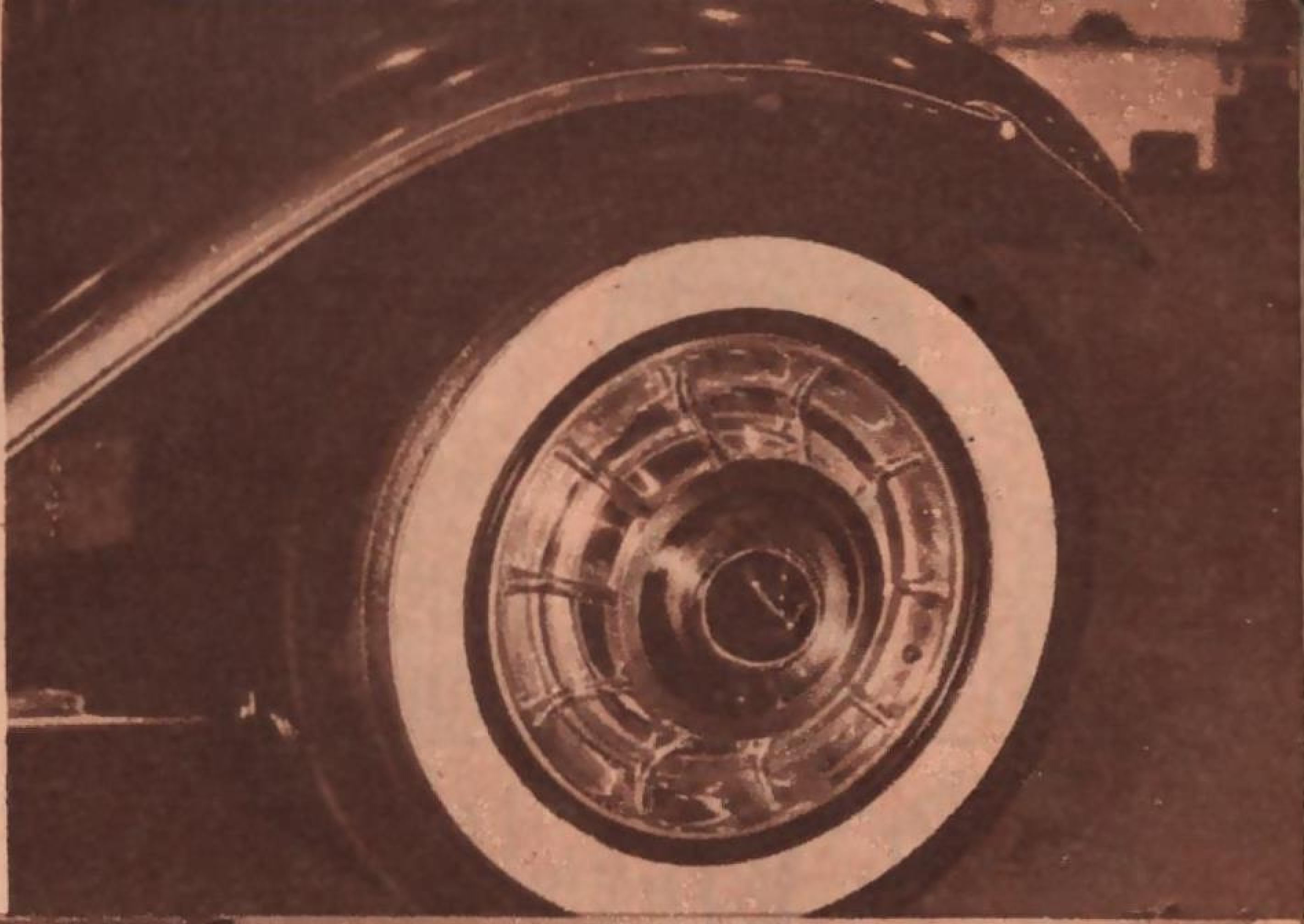
Late model deluxe wire wheel from Buick or Olds is big fad for early model coupes and sedans. The center piece is '56 Chev.



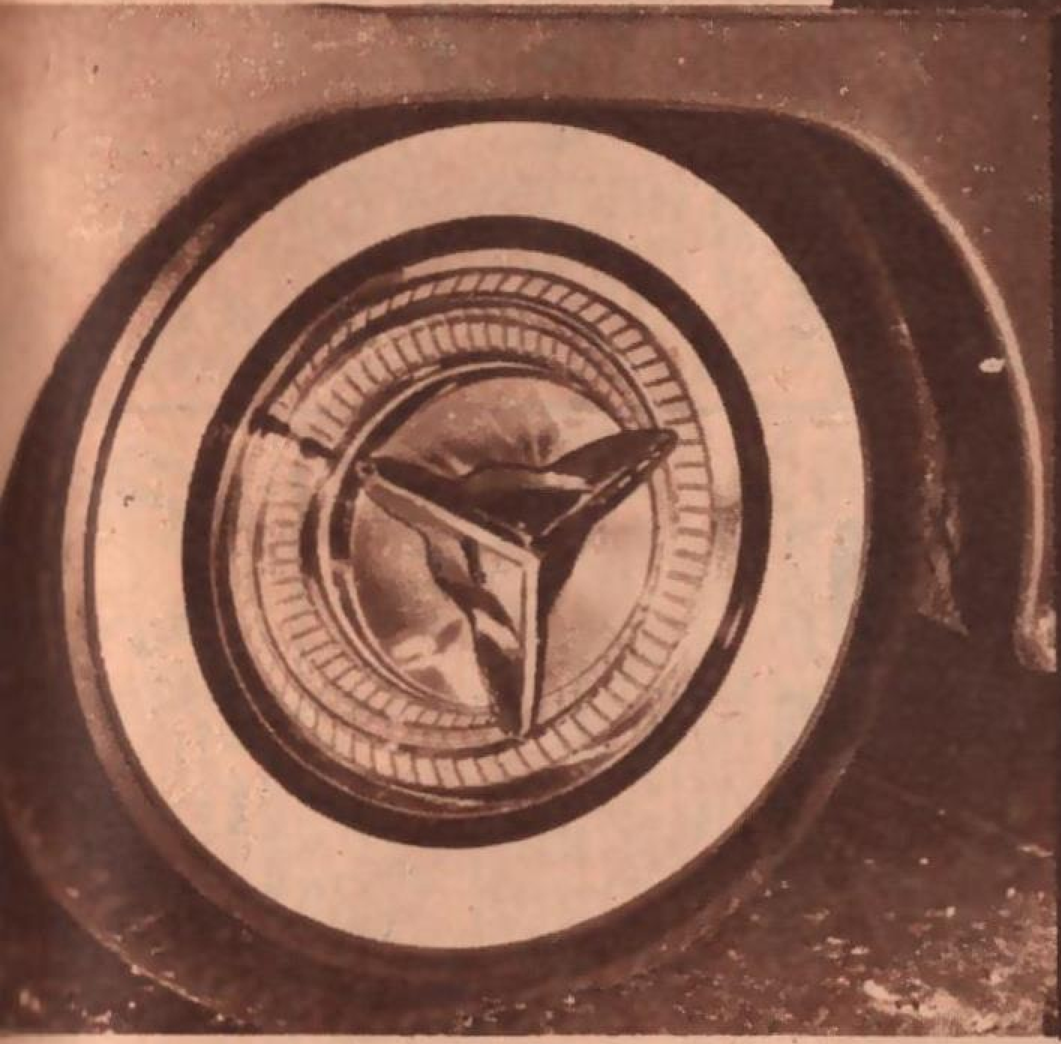
Spinner found in front bumper guard of '55 T-Bird makes universal center ornament. Hubcap emanates from '56 Buick.

Another universal item is the small spinner found in the '56 Buick bumper guard. Here we have '55 Oldsmobile hubcap, the small Buick spinner and eight accessory trim blades.

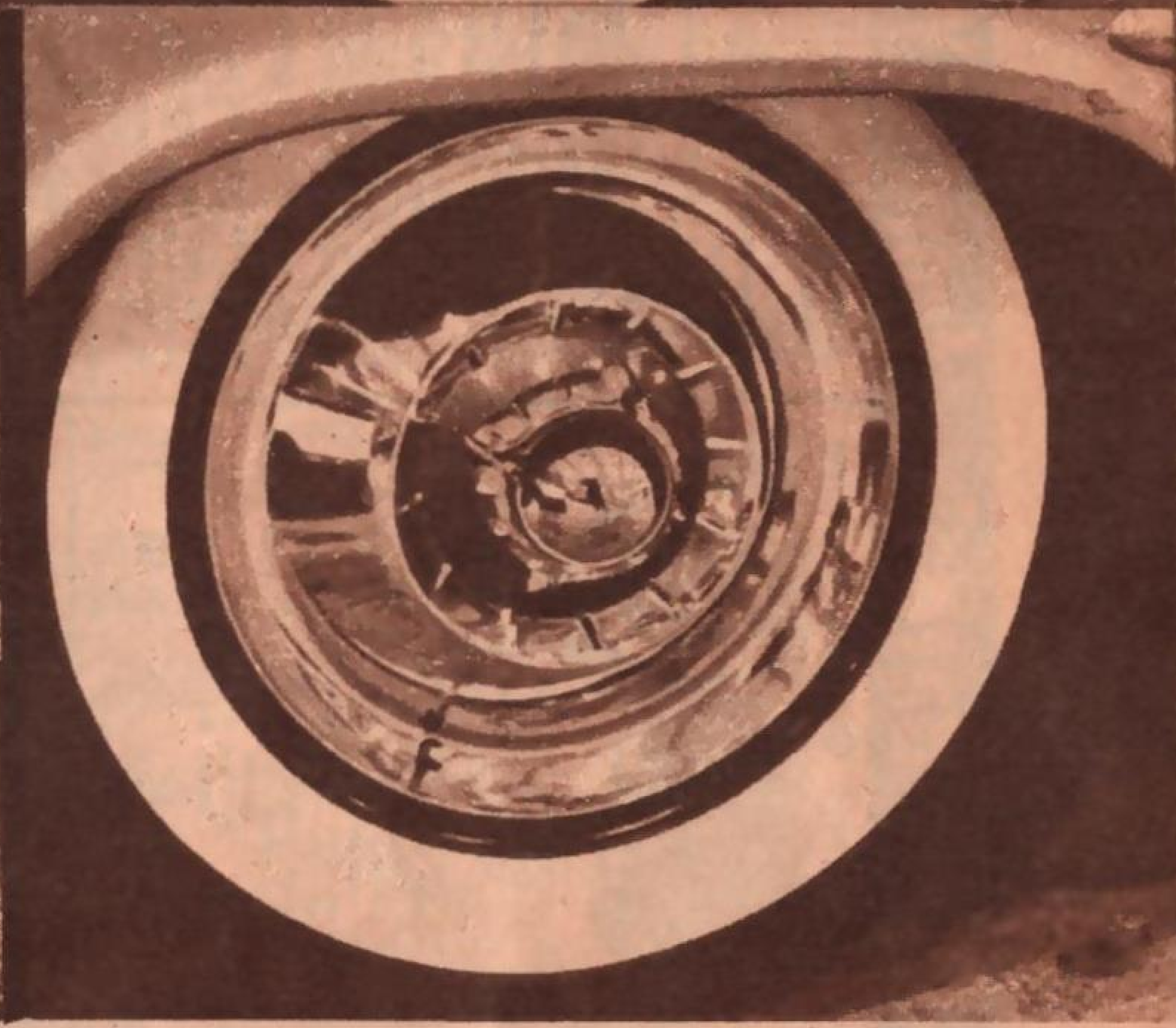




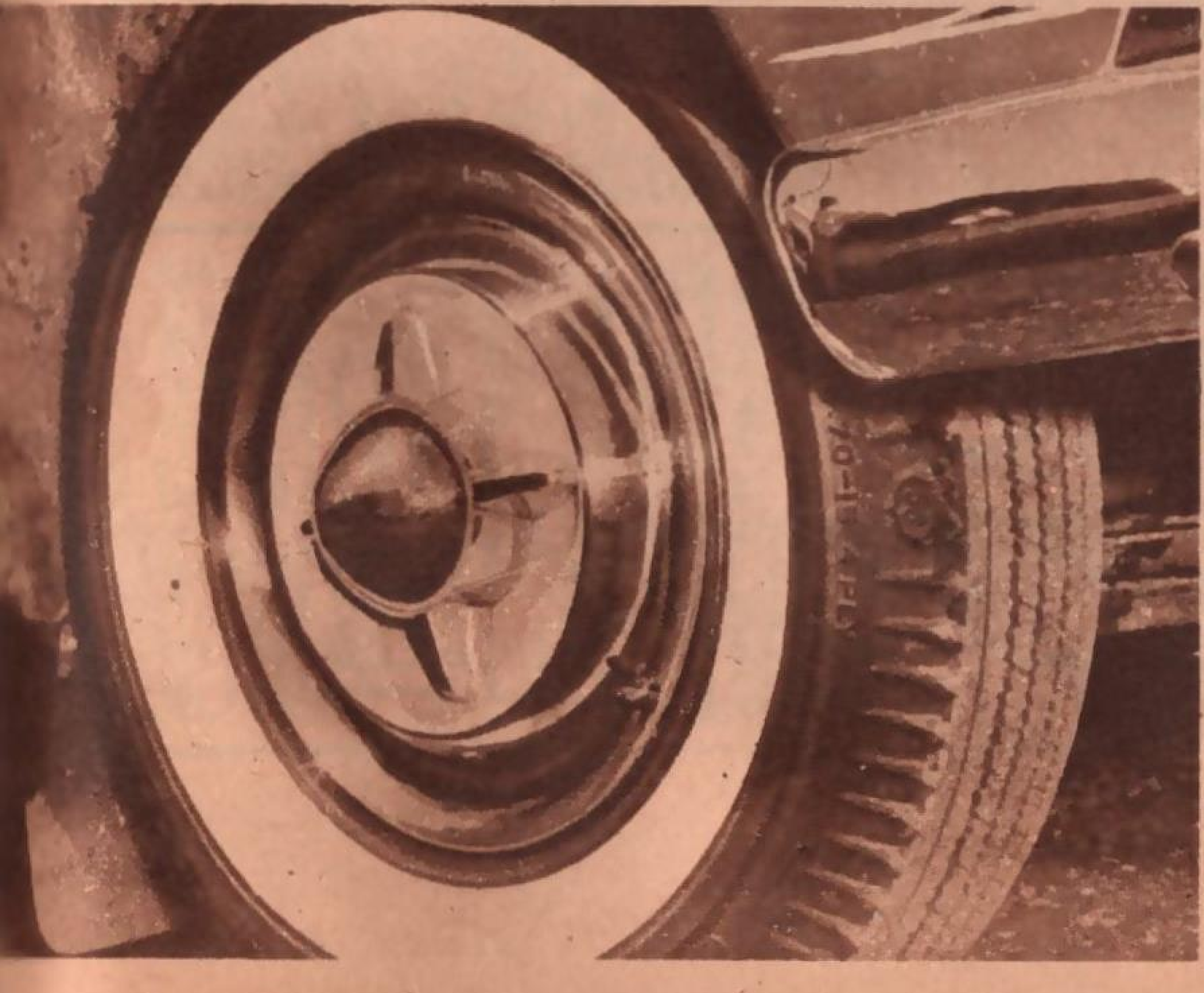
The very popular '56 Chevrolet Corvette wheel cover gets a new look with the addition of an accessory type spinner.



Again the '56 Buick cap serves as a base for some clever disguising—'56 Oldsmobile "Starfire" center blade is featured.



'54 Mercury caps take on the specialized appearance with the addition of a '51 Ford grille spinner. Note painted center.



Painting centers of hubcaps in contrasting colors is popular fad. Here, Dodge "Lancer" has painted treatment with spotlight housing attached at the center lending special effect.

Two Pages of Order-By-Mail Bargains from J.C. WHITNEY & CO.

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Automatic

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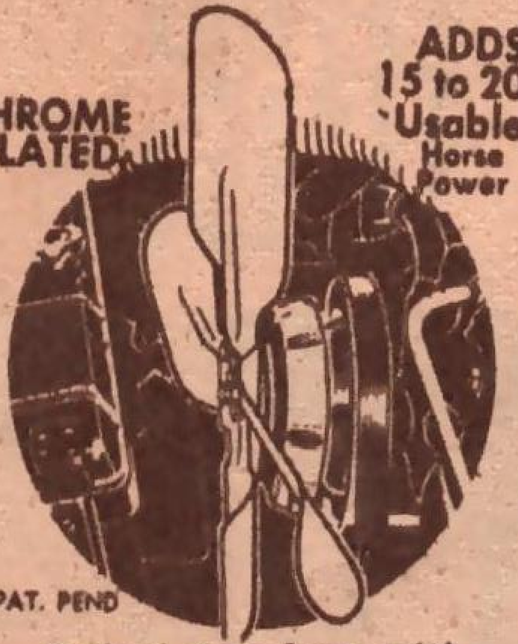

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The flow of air thru the radiator core at speeds in excess of 30 MPH provides sufficient cooling and makes the operation of the fan unnecessary.

Advantages as great as an overdrive transmission at a fraction of the cost. Acceleration increased up to 10%.

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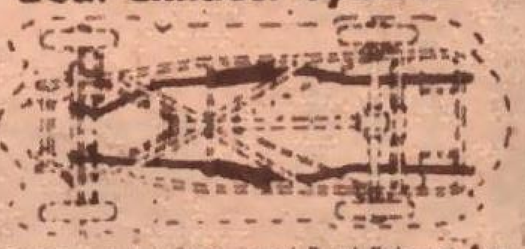
Increases horsepower, increases gas mileage, straight-thru construction, no back pressure, no high pitch irritating noises, deep powerful non-offensive tones. Specify make and model car. Each $4.95

Stock No. 37—POSTPAID **2 FOR $8.95**

DeLuxe Engineered Dual Exhaust Systems

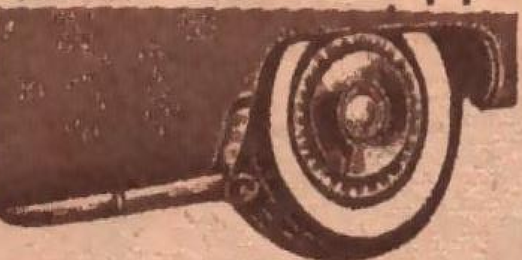


Our best quality Engineered Dual Exhaust Systems designed for each specific car. Heavy gauge oversize tubing permits more than double the flow of exhaust gasses, eliminating most of the back pressure. Gives increased energy and acceleration. Each set engineered for your car—no welding or cutting required. Choice of stock muffler, steel packed muffler or our very best grade Deep-Tone fibre-glass mufflers. Guaranteed not to blow out.

Car & Year	No. 265 Less Mflrs.	No. 266 With 1 Reg. Mflr.	No. 67 With 2 Steel Mflrs.	No. 179 With 2 Glass Mufflers
BUICK V8				
53-56	$17.95	$31.75	$32.50	$38.95
57	23.65	....	....	42.50
CADILLAC				
50-51 exc. conv.	15.50	27.10	30.50	36.25
CHEVROLET V8				
55-56	11.98	19.19	24.75	29.59
1957 exc. S.W.	12.75	19.95	25.80	30.35
DESOTO V8				
53-54	16.50	25.95	23.95	35.95
55-56 exc. conv.	15.10	26.50	29.50	34.89
DODGE V8				
55-56 exc. conv.	14.95	25.98	28.75	33.95
1957	14.75	25.85	27.85	32.49
FORD V8				
35-53 exc. conv.	12.35	19.25	25.75	28.95
54-56	13.98	21.98	27.50	32.50
1957	13.98	21.98	25.60	30.10
MERCURY V8				
39-53	13.85	23.45	26.50	31.50
1954	16.65	26.29	30.98	32.80
55-56	14.59	24.45	28.10	32.99
1957	16.39	28.65	30.19	35.29
OLDSMOBILE V8				
49-53	14.75	22.98	27.69	33.49
54-56	18.15	26.59	31.95	33.49
1957 88 only	18.10	26.95	31.89	36.98
PONTIAC V8				
55-56	16.65	24.09	29.75	33.95
1957	16.65	25.30	29.75	34.65
PLYMOUTH V8				
55-56	14.95	22.69	27.85	32.95
1957	14.75	22.98	27.85	32.75
STUDEBAKER V8				
51-52	16.35	21.95	28.98	33.95
53-54	16.65	22.25	29.29	34.25
1955	13.49	19.15	26.59	30.59

Be sure to state year, make, model, body style of your car. Also state if you have power steering, standard or automatic transmission.

Chrome Outside Tailpipe



Beautiful chrome finish adds beauty to the car—gives a car that California touch—does away with old style tailpipe.

Eliminates tailpipe scraping. Eliminates discoloration. Exhaust fumes are carried outside of car and into slipstream. Slipstream creates a vacuum in tailpipes causing a scavenging action, clearing exhaust system faster, providing a smoother performing engine. Mounts to muffler—extends outside of car in front of rear wheel. Can be adapted to all cars. Will fit either side. Can be used on single or dual exhaust systems. Easily installed. All pipes have 2 bends. Check chart for size & number.

Overall Length	Length Between Bends	Outside Diameter	Stk. No.	Price
24½"	15"	1¾"	No. 893	$6.65
34½"	22"	1¾"	No. 894	8.45
40"	26½"	1¾"	No. 895	9.95
68"	66"	1¾"	No. 896	18.95
68"	66"	2"	No. 897	18.95

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For Leather—Leatherette or Canvas.
Restore—Change Color—Waterproofs
Beautifies and Preserves,
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Ideal for Custom Car Interiors

With this coating you can renew or change color of all leather, or canvas, or leatherette **Easy to Apply, Brushes on, Dries in 2 Hours.** Flexible coating covers with a thin pliable coating, preserving the original leather grain. Protects: From stains, heat, scuffing and wear. Dirt cannot penetrate, will not chip or peel. Not affected by mildew, beverage, alcohol or salt.

Comes in 3 Convenient Sizes

Available in 12 colors. Other colors and shades obtained by mixing colors.

State No. & Color Choice		
	No. 632—4 Oz.	$1.00
	No. 633—Pint.	2.98
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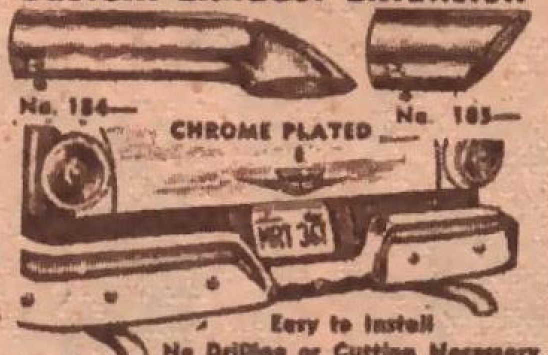
BERMUDA CLANGING BELL

It's the New "Rage"!

Gives a most amusing and commanding two-tone bell sound. Easily installed under car floor by driver's seat. Step on plunger. highly polished. Fits any car.

Stock No. 49 POSTPAID **$4.75**

Custom Exhaust Extension



No. 184—
No. 185—
CHROME PLATED

Easy to Install
No Drilling or Cutting Necessary

For 1955-57 Fords (Exc. '56 Fairlane), 1957 Mercury and 1957 Plymouth

- Prevents exhaust stains on bumper.
- Deflects exhaust gases downward.
- Designed to fit curve of tailpipe.
- 18 gauge steel with brilliant chrome plate finish.
- Easy to install — no drilling or cutting necessary.

For all 55-56 Fords (Exc. 56 Fairlane). Can be used on any car with 1¾" tailpipe— 1¾"x9".

For all 1957 Fords (Inc. Fairlane) — can also be used on any car with 2" tailpipe. 1¾"x9".

For all 1957 Plymouths. Can be used on any any car with 1¾" tailpipe. Size 1¾"x6".

No. 184— POSTPAID **$1.65**

For all 1957 Mercurys. Can also be used on any car with 2" tailpipe. Size 2"x4¼".

No. 185— POSTPAID, Each **$1.20**

Offset Exhaust Extension

For 1957 Chevrolet & Oldsmobile

SPECIFY EXACT YEAR, MAKE & MODEL

No. 183—POSTPAID **$.1.50**

LOWERING BLOCK KITS

LOWERS CAR 2 and 3 INCHES

With New Special Alloy Aluminum Blocks.

Lowers the rear end of car for better stability and cornering. Lower center of gravity prevents swaying —gives low slung appearance. Easily installed — special "U" bolt extensions to attach to "U" bolts on car.

Will Fit Following: Cadillac, 41-53; Chevrolet, 40-57; Chrysler, 37-52, DeSoto, 37-52; Dodge, 37-54; Ford, 49-57; Kaiser-Frazer, 47-54; Hudson, 48-54; Lincoln, 49-57; Mercury, 49-57; Nash, 41-54; Packard, 49-50; Plymouth, 37-54; Pontiac, 49-57; Studebaker, 49-50; Willys, 45-54, and all other cars & trucks with 1½" or 2" wide springs.

No. 873 —For 2" Drop. Kit........ **$3.98**

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WILL FIT FOLLOWING

Cadillac, 54-57; Chrysler, 53-57; DeSoto, 53-57; Dodge, 55-57, Packard, 51-54; Plymouth, 55-57; Studebaker, 51-57, and all other cars and trucks with 2½" wide springs.

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Convert Any Black Tire to Rubber

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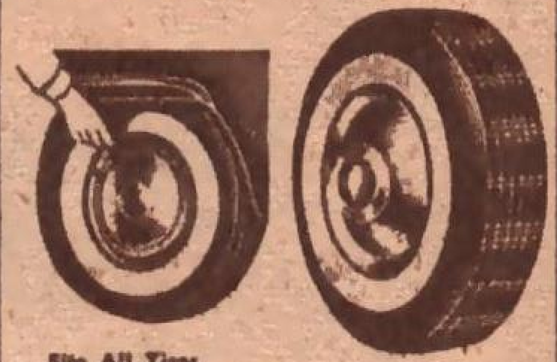

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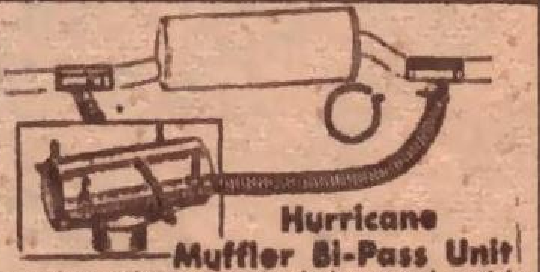

Hurricane Muffler Bi-Pass Unit

Complete with cut out, dash control, cut-in, 48 in., 1¾ in. Flexible pipe, clamps, instructions. Fits all 1¾ to 2¼ inch exhaust systems. Use 2 for dual exhausts. Get that open-pipe roar.

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DYNA Highly Polished Aluminum

CARBURETOR SUPERCHARGER

Easily Installed. Complete with gasket cap, screws & instructions. A highly efficient mixing chamber that actually mixes gas and air with volcanic force. Lowers the fuel-air temperature 50 to 60 degrees, allowing the mixture to enter carburetor before condensation takes place.

- INCREASES MILEAGE
- INCREASES POWER
- GREATER ECONOMY
- GREATER HORSE-POWER
- Eliminates "PING"

For All Cars. Give Exact Year, Model and Make of Car.

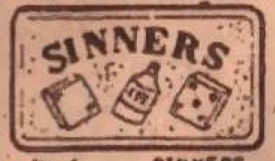
Many owners report complete absence of "Ping" due to uniform fuel dispersion, even with low test fuel.

No. 883 — 1&2 Carbur. barrels — $14.50
No. 884 — 4 Carbur. barrels — 15.95

New! CAR PLAQUES

in 10 Exclusive Original Designs

Thick cast aluminum, beautifully polished, rust proof. Approximately 9 inches long, 5 inches wide, full 3/16 inch thick. Can be placed anywhere on car—Swing 'Em, Mount 'Em, Paint 'Em. Choose your favorite here:



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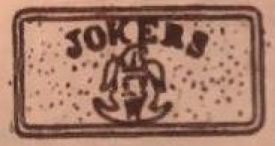

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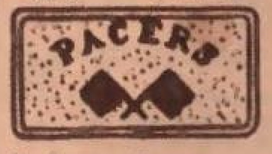
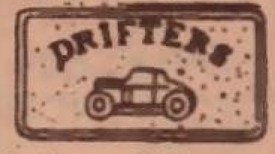
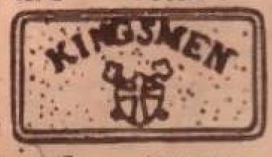


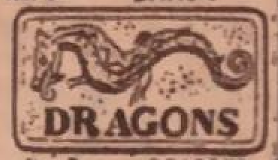
No. C Pacers



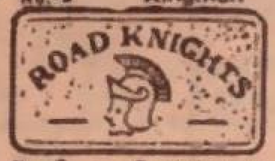
No. D Drifters



No. E Kingman



No. F —DRAGONS



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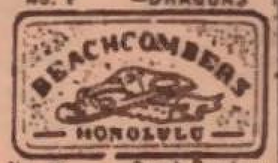

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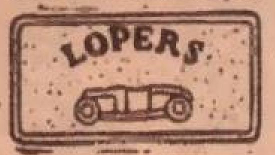

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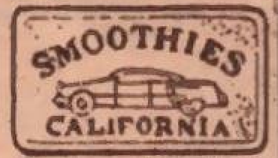
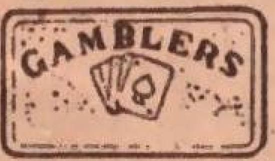
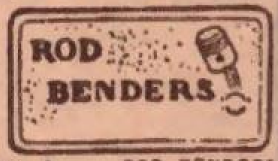


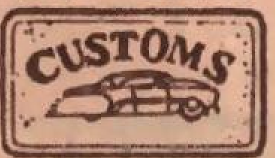
No. J SMOOTHIES



No. K GAMBLERS



No. L ROD BENDERS



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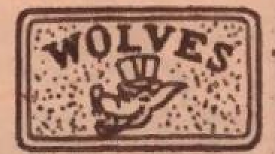
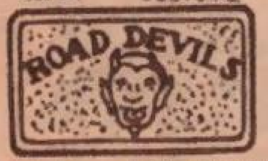


No. N WOLVES



No. O -ROAD DEVILS

Specify Plaque wanted.
No. 453
each. **$2.98**

Special

Low Priced DUAL SETS

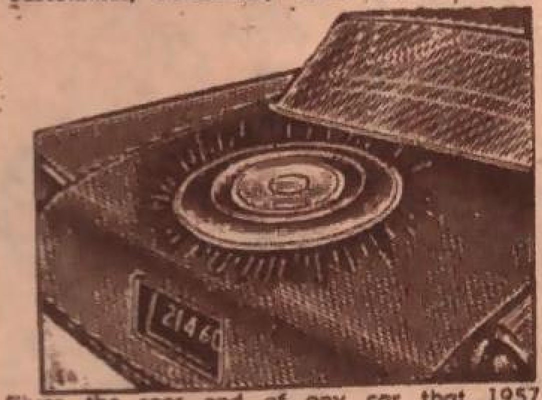
With Mellowtone Fibre Glass Mufflers

These quality Dual Sets are furnished with all necessary parts and easy installation instructions.

Ordering Instructions Same As Above.	No. 175 Less Mufflers	No. 176 1 Steel or Glass Packed Muffler	No. 178 With 2 Steel or Glass Packed Mufflers
BUICK 53-56	$12.95	$17.90	$21.90
CADILLAC 50-51	11.95	17.45	21.95
Chevrolet V8, 55-57	8.95	14.00	17.95
Chrysler V8, 51-56	15.95	20.90	24.90
Dodge V8, 53-56	11.95	17.45	21.95
DeSoto V8, 52-56	12.95	17.90	21.90
FORD 35-57	8.95	14.00	17.95
Mercury 39-56	8.95	14.00	17.95
OLDS 49-56	11.95	17.45	21.95
Plym. V8, 55-56	11.95	17.45	21.95
Pontiac V8, 55-56	11.95	17.45	21.95

Imperial Type "Dummy" SPARE WHEEL COVER

Fits 1957 Cars And All Earlier Models With 26 Inch Flat Surface In Trunk Lid. Customizes, Beautifies, Years Ahead Styling.



Gives the rear end of any car that 1957 Imperial look. Encircled with bright Stainless Steel ring moulding, available in Gold anodized aluminum body with Silver center hub cap or Silver anodized aluminum body with Gold center hub cap. Lifetime finish. Easy, quick installation.

Stk. No.	Description	
186	—Silver Body, Gold Center Cap	$24.95
187	—Gold Body, Silver Center Cap	

SAME AS ABOVE IN PRIME FINISH with Stainless Steel Center Cap. No. —Each **$19.95**

AUTO FABRIC SPRAY

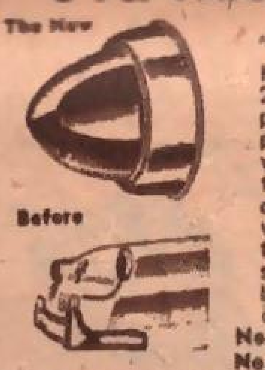
FABRIC COAT

For a new looking car interior. Brightens and freshens faded and soiled fabrics. 12 Oz. pressurized cans for use on headliner, door paneling and floor covering. Does not rub or fade. Can tu-tone upholstering. Choice of red, rust, brown, tan, dark and light green, dark and light blue, dark and light gray, yellow, maroon, rose and black.

Specify color when ordering.

No. 54—POSTPAID ... **$2.95**

6 Pc. TAIL LIGHT KIT

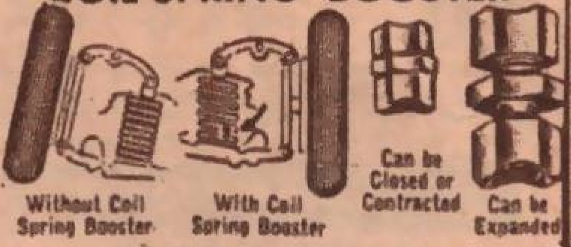


Gives That 1955 Olds "Look" To 52-56 Fords

Kit consists of 2 lenses, 2 chrome rims, 2 adapter plates. Easily installed in place of present rims without drilling or cutting. Can also be welded or leaded to the fender without further alterations. Lenses legal in all states. Adds length to body appearance & styling.

No. 451—52-54 }
No. 586—55-56 } **$9.95**

ADJUSTABLE COIL-SPRING BOOSTER

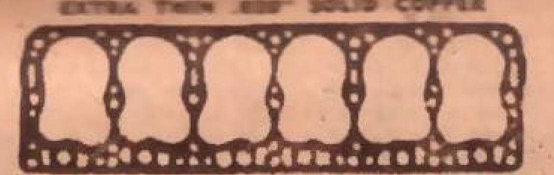


- **Adjustable feature allows for levelling of car where the sag is uneven.**
- **For Coil Springs On All Cars.**

Prevents: side sway—sagging springs—springs bottoming—uneven tire wear. Made from steel—rust proof. Easily adjusts springs to desired height. Raises front end and simplifies wheel alignment. Reduces tire squeals on turns and front end brake dive. Quick and easy to install—no special tools necessary. Sold in pairs.

No. 898
Pair... POSTPAID **$2.00**

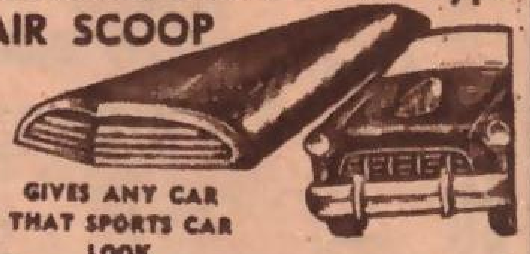
EXTRA THIN .020" SOLID COPPER



These copper gaskets are only .020" thick. It is the same as milling heads .040" to .050", and "hops up" the motor to give amazing acceleration power and mileage. State exact year, make and model when ordering. (If car is V8 type two gaskets are furnished at no extra charge.)

Stock No. 21—POSTPAID........ **$4.95**

Chromed Thunderbird Type AIR SCOOP



GIVES ANY CAR THAT SPORTS CAR LOOK

Long tapering Thunderbird type air scoop lends the finishing touch to giving the car a sporty look. 23" long and 13" wide at the front tapering to 6" wide at the back. Stainless steel front plate with the rest of the scoop in prime finish so that it can be finished to match the car. Furnished complete with rubber gasket and sheet metal screws for easy mounting. Can also be welded or fibre glass mounted.

No. 876—CHROME PLATED, Each **$11.95**

No. 839—Prime finish, each............ $7.50

Exhaust tone is controlled from the dash. Can be used as a cut out in the country and closed in restricted areas. Or may be used to operate two different toned mufflers. Well constructed of heavy plate steel. Strengthens the exhaust pipe.

UNIVERSAL—Fits All Cars

No. 66—POSTPAID Each......... **$2.89**

Stop BURNING OIL!

FAMOUS

ENGINE OVERHAUL KIT

- ● FORTIFIES YOUR OIL
- ● REJUVENATES WORN MOTORS
- ● COMPLETE CYLINDER AND RING JOB WHILE YOU DRIVE

Engine Overhaul
Liquid Plate
Engine Overhaul Pellets
COMPLETE
$4.95

Reg. $7.00 value

Do-it-yourself in 10 minutes! Save on repairs. Simply drop Pellets into plug openings, pour Liquid Plate in oil. This patent combination rebuilds your motor while you drive. Good for 10,000 miles.

No. 125—POSTPAID **$4.95**

J.C. WHITNEY & CO. Dept. C26

1917 Archer Ave., Chicago 16, Ill. USE HANDY ORDER BLANK ➡

USE THIS HANDY ORDER FORM — MAIL TODAY!

J.C. WHITNEY & CO. 1917 (C26) Archer Ave., Chicago 16, Ill. Ship following order on money-back guarantee of satisfaction:

Quantity	Stock No.	Description	Price

I Enclose $__________ to cover payment in full (or 25% deposit if C.O.D.)
(NOTE: WE PAY POSTAGE on items marked **POSTPAID** when payment accompanies order. You pay shipping charges on items not marked POSTPAID. If C.O.D. order, enclose at least 25% deposit, pay balance plus shipping charges upon delivery.)

Name____________________

STATE—My car is a__________ Year,________ Model________ No. of Cyl.____

Address____________________

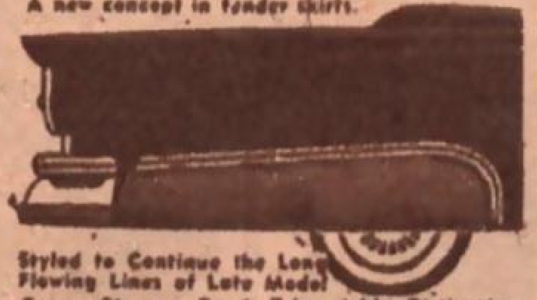
City__________ Zone____ State________

☐ Catalog sent Free with your order. Check here if you want Catalog only—Send 25c.

Fast Service and 100% Satisfaction Guaranteed J.C. WHITNEY & CO.

New Cruiser Fender Skirt

A new concept in fender skirts.



Styled to Continue the Long Flowing Lines of Late Model Cars. Chrome Bead Trim Adds Distinction. 61" Long — 14" High.

Designed to cover the flare and beading of the fender. Blends into the fender and gives body and fender the appearance of a combined flowing continuous unit. Gives earlier models a late model look. Chrome bead trim along top edge adds an additional distinctive touch. Rubber beading prevents rattle—positive locking device. In prime finish.

For the Following Cars in 2 Door Models Only:

Chevrolet	55-57	Mercury	49-51
Chrysler	1957	Mercury	55-57
DeSoto	1957	Oldsmobile	54-57
Dodge	53-57	Plymouth	53-57
Ford	49-51	Pontiac	55-57
Ford	55-57		

Specify year and make when ordering.

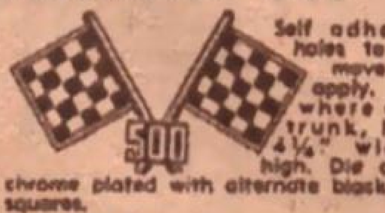
No. 174— Pair **$28.95**

STEEL VENETIAN BLINDS

One model fits all cars 39 to 57. Very easy to install. All steel parts bonderized. Beautifully baked-enamel finish adds beauty to any car. Keeps out hot summer sun but allows perfect visibility. Protects seat covers.

No. 30—POSTPAID, Each **$3.69**

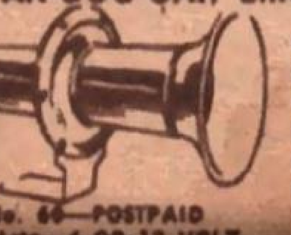
Pacemaker "500" Flags



Self adhering! No holes to drill. Remove backing & apply. Fits anywhere on doors, trunk, hood, etc. 4½" wide, 2½" high. Die cast. Triple chrome plated with alternate black & chrome squares.

No. 440 Postpaid **$1.49**

AH-OOO-GAH Chromed HORN

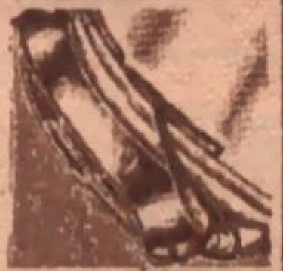


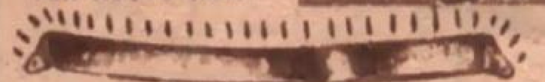
Here it is for the sport car enthusiast. Not a vibrator or other substitute but a genuine motor driven horn.

No. 66—POSTPAID
State—6 OR 12 VOLT **$12.60**

AIR SCOOP for 55-56 PONTIAC, CHEVROLET and 1957 FORDS

CUSTOM DESIGNED FOR ABOVE CARS.





- Greater comfort—summer or winter.
- Accelerates air flow through cowl vent.
- Increases air flow up to 100% at normal speeds.
- Eliminates continuous operation of heater fan.
- Minimizes snow, and slush from entering and freezing in cowl openings.
- Adds harmonizing beauty to your car.

Made from steel and furnished in Triple Chrome Plate or primed to be painted any color desired—easily and permanently attached with only 2 screws.

Specify make, year and model when ordering.

No. 841 —PRIME FINISH. each....... **$3.59**

No. 842 —CHROME PLATED. each....... **$5.65**

Terrific GIANT DICE For The Car

BIGGEST NOVELTY SENSATION SINCE FOXTAILS

Here is the latest novelty for autos. Car dice are 2 inch cubes covered with colorful angora-type fur. Light as a feather — they swing over the dash — hang on the rear view mirror. Furnished in red, white or black with contrasting dots.

No. 760 —Red
No. 761 —White } **POSTPAID** Pair **$1.49**
No. 762 —Black

No. 793 Blue. No. 794 Green.

GIANT-GIANT DICE

These colossal 3" dice are an extremely attractive novelty — They can be hung over rear view mirror bracket, pinned to headliner or used in many other places. These are available in 4 colors of dots on a white angora type fur background.

No. 866 —Black Dots
No. 867 —Blue Dots
No. 868 —Red Dots
No. 869 —Green Dots

POSTPAID Per Pair **$2.95**

Low Priced! Giant Dice

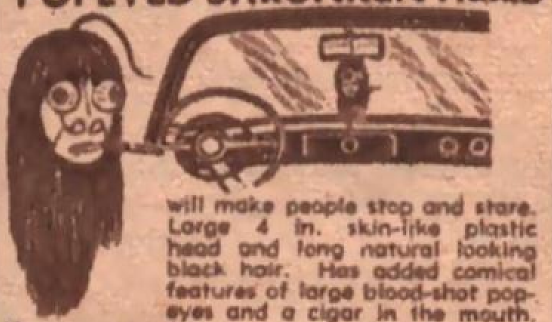
Resembles above Giant Dice, but slightly smaller in size. Specify color and No.

No. 790 Red. No. 791 White. No. 792 Black.

POSTPAID. Per Pair **$1.00**

A novel and different pin-up that

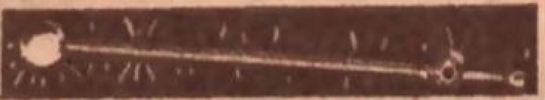
POPEYED SHRUNKEN HEAD



will make people stop and stare. Large 4 in. skin-like plastic head and long natural looking black hair. Has added comical features of large blood-shot pop-eyes and a cigar in the mouth. Hang one in the car, bar or den. Choice of black, white or pink face. Specify when ordering.

No. 145—Each **POSTPAID** **$3.49**

Chrome Gear Shift Arms



Adds That Touch of Chrome Left Out on the Factory Equipped Cars. Heavily chrome plated gear shift arms to replace the painted arms which were the original factory equipment. Easily replaces the original arm without the need of any special tools.

Stk.No. Year Car	Each
No. 854 40-56 Chevrolet	$3.49
No. 855 40-55 Ford 40-48 Mercury	4.95
No. 856 1956 Ford	5.50

Give year, make and model of car

Chrome Oil Dip Sticks

For Ford and Chevrolet

To match the other chrome engine items, these dipsticks are heavily plated and will complete the chrome customizing of the engine. Calibrated and marked same as original dipstick.

No. 850 —For All Fords........
No. 851 —For All Chevs........ } **POSTPAID $2.00**

CHROME PRESSURE RADIATOR CAPS

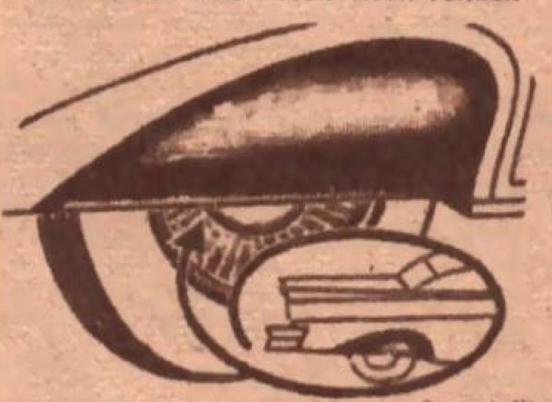
Adds an additional touch of chrome to dress up and customize the car. Tested and guaranteed, these pressure caps will give long use and retain their sparkling appearance.

No. 857 All Models Chev, Ford & Mercury. Specify Year Make, and Model. Specify if Early or Late 53 Ford or Mercury.

POSTPAID each. $2.00

FOR ALL CARS INCLUDING 1957 Factory Duplicate — Custom Fit FENDER WELL FENDER SKIRTS

FITS INSIDE AND FLUSH WITH FENDER

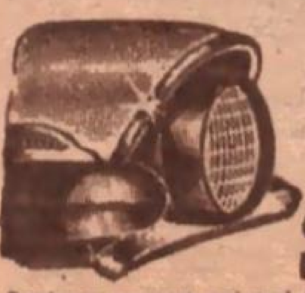


- Same as original equipment
- Perfect fit.
- Prime finish.
- Heavy Gauge steel.
- Locking lever handles.

SPECIFY YEAR, MAKE & MODEL

No.	Car	Type of Bottom	Pair
684	BUICK 50-53 All	Plain	$11.95
685	BUICK 54 & 55, 2 Door Super & Rdmster	Plain	14.95
686	BUICK 54-55, 4 Door Super & Rdmster Exc. Hardtop	Plain	13.95
832	BUICK 54-56 Special and Century	Flared	16.50
687	Chevrolet 49-54	Plain	11.40
688	Chevrolet 1955-57	Flared	11.95
691	Dodge 1956	Plain	12.95
833	Dodge 1957 All	Flared	13.95
834	Dodge 1957 All	Plain	12.95
692	Ford 49-51	Plain	10.40
693	Ford 52-56	Flared	10.99
835	Ford 1957 All	Flared	11.95
836	Ford 1957 All	Plain	10.95
694	Mercury 52-54	Flared	10.99
840	Mercury 55-56 All	Flared	11.95
864	Mercury 1957	Flared	11.95
695	OLDS 98—1955	Flared	14.95
696	OLDS 88 1956-57	Flared	14.95
697	Plymouth 53-55	Flared	11.98
698	Plymouth 1956	Flared	12.75
837	Plymouth 1957 All	Flared	13.95
838	Plymouth 1957 All	Plain	11.95
699	Pontiac 49-52	Plain	12.67
865	Pontiac 1957	Flared	12.75

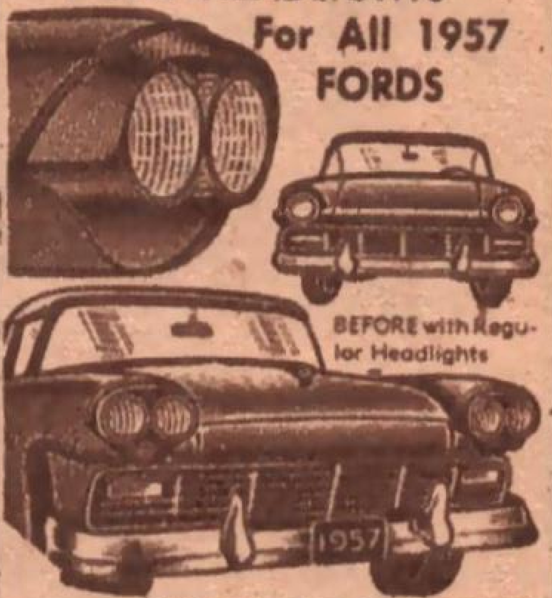
NEW! for ALL 1957 FORDS! Chrome Front Fender Trims



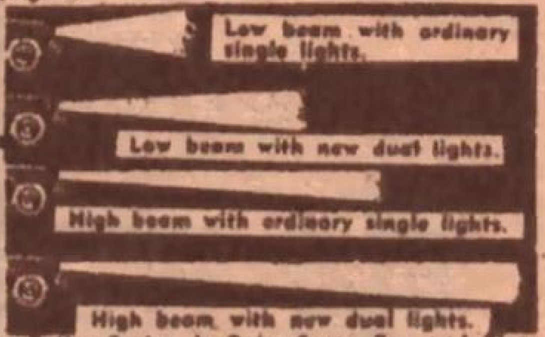
Replaces present painted front edge of fender over headlights on 1957 Fords. Adds greatly to appearance of the car, gives front edge of fenders a finished look in gleaming chrome, same as most other 1957 cars. Precision made from die cast metal, will fit perfectly, matches present holes with no drilling or alterations. Easily installed by anyone in a few minutes.

No. 853 pair.................. **$5.98**

DUAL HEADLIGHTS For All 1957 FORDS



AFTER with Latest Dual Headlights **Gives The 1957 Ford The 1958 Look. Dual Headlights Will Be Standard Equipment On Most 1958 Cars. Cars With The Old Fashioned Headlights Will Become Obsolete. Dual Headlights On Your 1957 Ford Will Increase Its Value Much More Than The Cost Of The Dual Lights.**


Low beam with ordinary single lights.
Low beam with new dual lights.
High beam with ordinary single lights.
High beam with new dual lights.

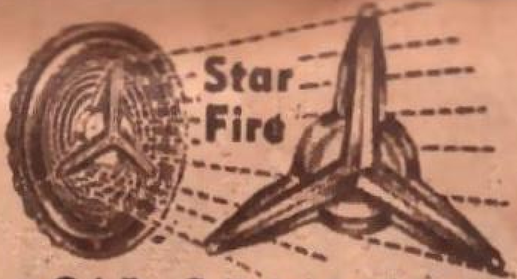
- **Better Seeing In Rain, Snow, Fog and Clear Weather, Too.**
- **3 Times As Much Light From Lower Beam In Curb Area. Makes Night Driving Safer.**
- **More and Better Light From Both Beams.**
- **Glass Pads Molded In The Lenses Enable Accurate Adjusting Quickly and Easily.**

APPROVED IN ALL STATES

Increase lighting more than 100%. Now used as standard or optional equipment on several higher priced cars. On the high beam all four lights operate, on the low beam only two are used. Four headlights provide increased lighting—add great intensity of light for clearer vision, also increase distance of lighting down the road. Designed to flow into fender lines and improve looks of the front end. Makes the car look longer and racier. Furnished in complete kits consisting of high compact Styrene shells (stronger than metal) in preprime finish for Laquer or Enamel—all four new bulbs, all wire and parts necessary for quick, easy, 20 minute installation. No drilling or modifications, they just bolt on in place of original lamps. No welding or cutting, only tool needed is a screwdriver.

No. 173—
Pair.......... **POSTPAID**....... **$56.50**

SATISFACTION GUARANTEED

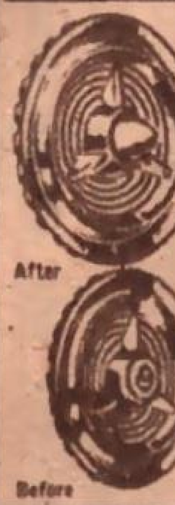


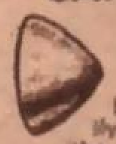
CAP SPINNER

Beautifies the Car the Easy Way. Dresses up the hub cap. Gives the car that Custom look. Heavily Chrome Plated on stamped steel. Easily attached—no special tools needed. Can be used on all Hub Caps.

No. 853—Each **$3.95**

FIESTA HUB-CAP BULLET





For The "Custom Look"
A beautiful chrome plated bullet that is easily attached to all the **Fiesta** type wheel covers, both original and replacement types—Adds beauty to the hub caps and gives the custom look—Bullet depth 1½"—Fits on center of cap perfectly — Easily adaptable to other hub caps and wheel covers. Overall dimensions 2⅝" diameter by 1½" high.

No. 188 —Set of 2 . . $2.23
No. 189 —Set of 4 . . $4.39

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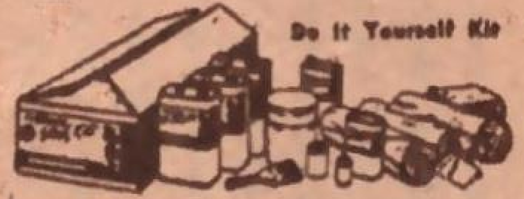

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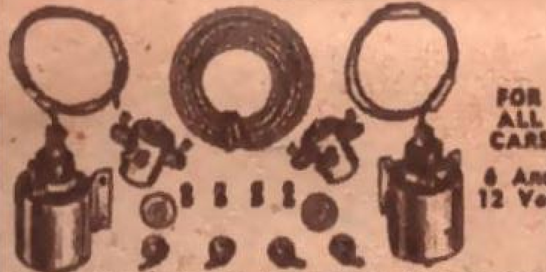

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6 And 12 Volt

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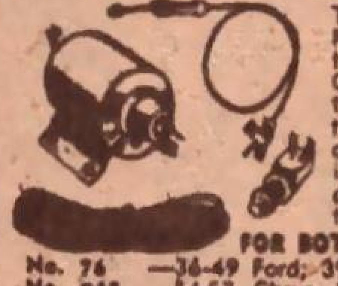
Electric TRUNK KIT



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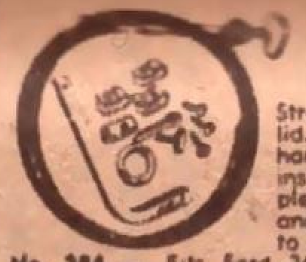

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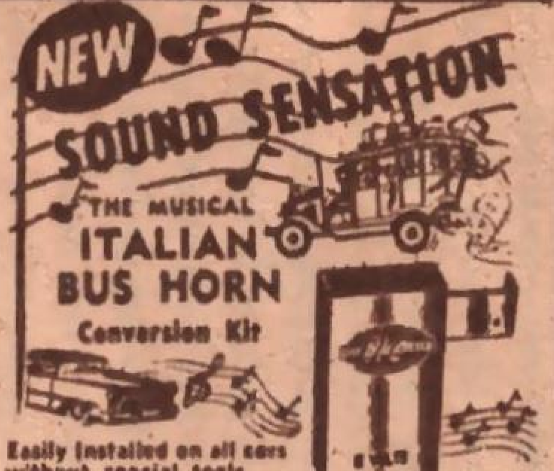

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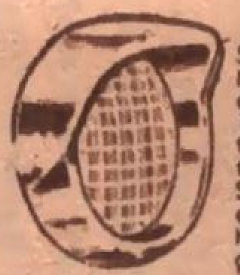

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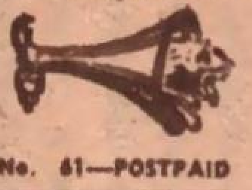

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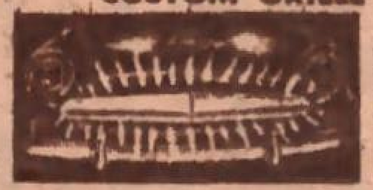

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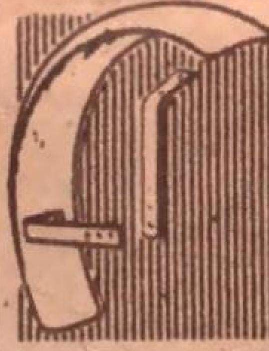

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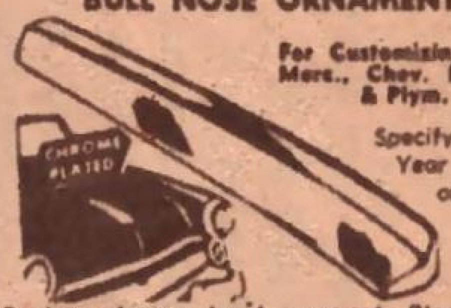

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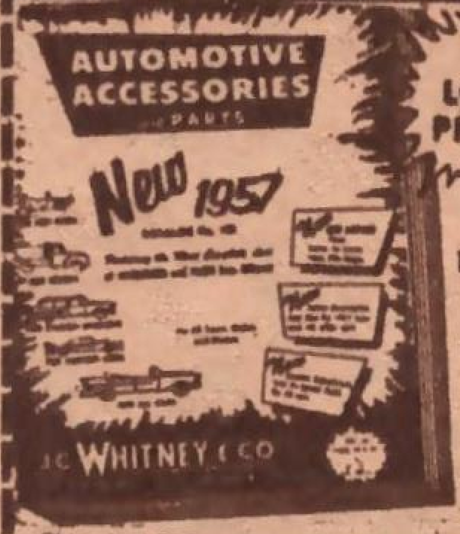

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WHAT'S YOUR PROBLEM?

By Bob Pendergast

LONGER STROKE OLDS

Dear Bob:

I've heard you can put a '53 Cadillac crankshaft in an Olds V8 block and gain an ⅛" stroke increase. Is this true?

— Burl Wedmore,
Compton, Calif.

The Cad crank does not fit the Olds. The Cad stroke is 3⅝", the Olds was 3-7/16" until '57. The '57 Olds cranks are 3-11/16" stroke, and can be used in earlier blocks by turning the mains down to the smaller size, thus providing a ¼" stroke increase without welding or metal-spraying being necessary.

LOWERING COILS

Dear Bob:

I have lowered my '49 Chevy by heating the springs in front, and have had some custom shops tell me it was all right if I didn't mind a rough ride and others tell me I did the wrong thing. Would you please give me the word on this?

— Barry Page,
Springfield, Mo.

The word is that you could have done it a better way, Barry, as coil heating decreases the distance between coils and thus magnifies every bump you hit. Coil cutting is better than coil heating because the coil interval is unchanged. The car also has its front suspension stiffened by coil cutting as the stiffness of a coil spring is in inverse proportion to the number of coils involved — which is just the opposite of removing leaves from a leaf spring. Additional stiffness up front in '49-'53 Chevs is very desirable from a handling standpoint — I'd advise you to purchase some new springs and start over, for a better riding, better handling automobile will be the result.

TORQUE PLUS

Dear Bob:

I have only one question, but am really stumped for the answer; How does the Cook & Bedwell dragster do it (167 mph, 9.28 E.T.) without a transmission? Is he using rolling starts, or what? I have one of my own under construction and would sure like to know this!

— Bernard Levy,
Waco, Texas

Torque plus a bite is the answer, Barney — just as it always is when an acceleration record is broken. Conversations with Emery Cook reveal he credits the flexibility of the new Iskenderian cam he's using, coupled with the better bite offered by the latest-type drag "slicks" on the car. Made by Bruce Alexander, of Oakland, Calif., these tires have a concave tread pattern under normal inflation pressures used by dragsters, allowing pressures about ten pounds *higher* to be used before the tread levels-off, thus lowering the rolling resistance of the tires at the high speeds encountered at the far end of the strip. Higher tire pressures also decrease the amount of torque required to bring the car off the line in high gear—but let's face it, power-to-weight ratio is still the biggest factor in determining how many gears a car needs to accelerate through the standing-start quarter-mile at the highest possible speed. This car definitely *has it.*

BUGGED BY INSERTS

Dear Bob:

I have a '53 Chev truck engine in my '41 Chev coupe. It's 3/4 race, with a .090 overbore, McGurk pistons, tubular push rods, .060" off the head, 3/4 cam, etc.

The insert bearings are slipping within the con rods, resulting in the crank miking .063" flat after only 4,000 easy miles. The '53 truck engine, as you know, has full pressure lubrication, unlike the earlier models. It looks like the inserts are turning with the crank, loosening up the rods, which in turn pounds the crank flat. What now?

— Mel Watson,
Reno, Nevada

If at first you don't succeed, try, try, again . . . evidently one of the most important steps of insert bearing installation was skipped on your particular engine — that of miking the spread of

the inserts before placing them on the crankshaft. Measured across their widest dimension, insert bearings should equal the diameter of the crank, the recommended clearance, totaled; plus twice the thickness of the bearing material itself. A reading of less than this means the bearings will tend to bind on the shaft and commence rotating within the rods, which as you say, they are not supposed to do in your particular engine. A reading of more than that specified is just as bad, especially in full-floating bearing type rods, such as used in the '48 and earlier Ford V8 and Mercury engines — this causes the insert to catch in the relief in the parting faces of the rods and cease rotation, which is just the opposite of your problem. In these Fords and Mercs two rods go on each bearing, so when one rod binds up, the other immediately goes to work on destroying the bearing, itself, and the engine, in that order!

WHY SOLID LIFTERS

Dear Bob:

In what way does collapsing hydraulic lifters and substituting adjustable pushrods for the stock items benefit an engine? It is my understanding that hydraulic lifters, when opperating properly, are self-adjusting, if this is true, what is the need for adjustable pushrods?

—Raymond W. Scott,
Cincinnati, Ohio

You just answered your own question, Ray. If hydraulic lifters were really self-adjusting there wouldn't be any need for adjustable pushrods, but after 4,000 rpm, they aren't self-adjusting

CONTINUED

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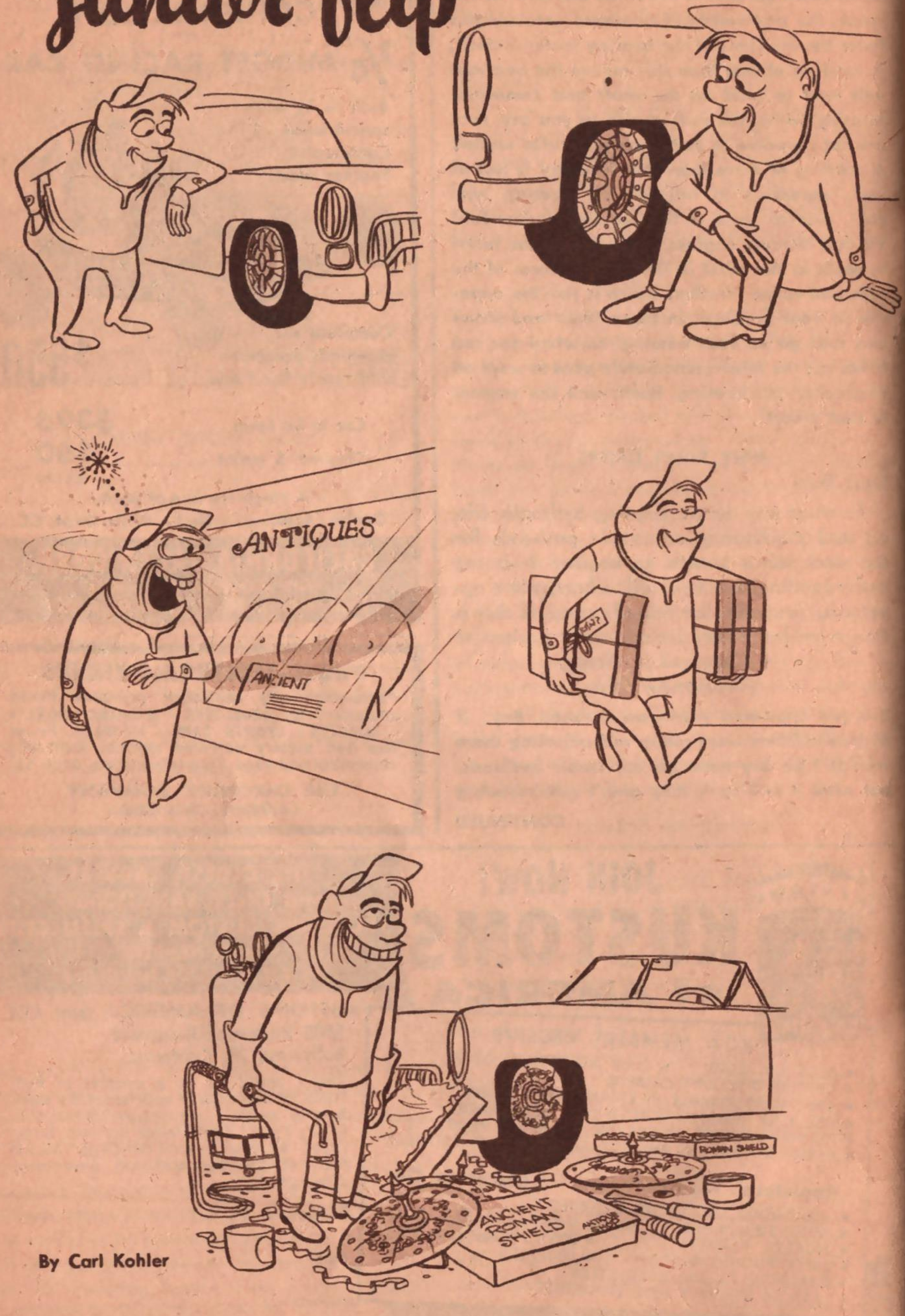
ANTIQUES
ANCIENT
ROMAN SHIELD
ANCIENT ROMAN SHIELD
ANTIQUE SHOP

By Carl Kohler

anymore! Hydraulic lifters are a practical proposition up to just about that many rpm, then — nothing. They open the valve, fill-up with oil, and keep it open. Detroit is beginning to wish they'd never heard of 'em, because even the milder stock engines must turn more than 4,000 to get their maximum horsepower nowadays. Chevrolet's optional engine for '57 needs 6,000 to put out its best — and does it, needless to say, without hydraulic lifters.

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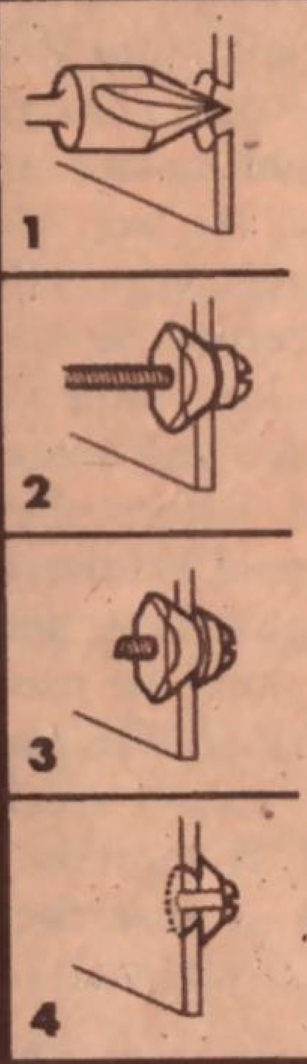

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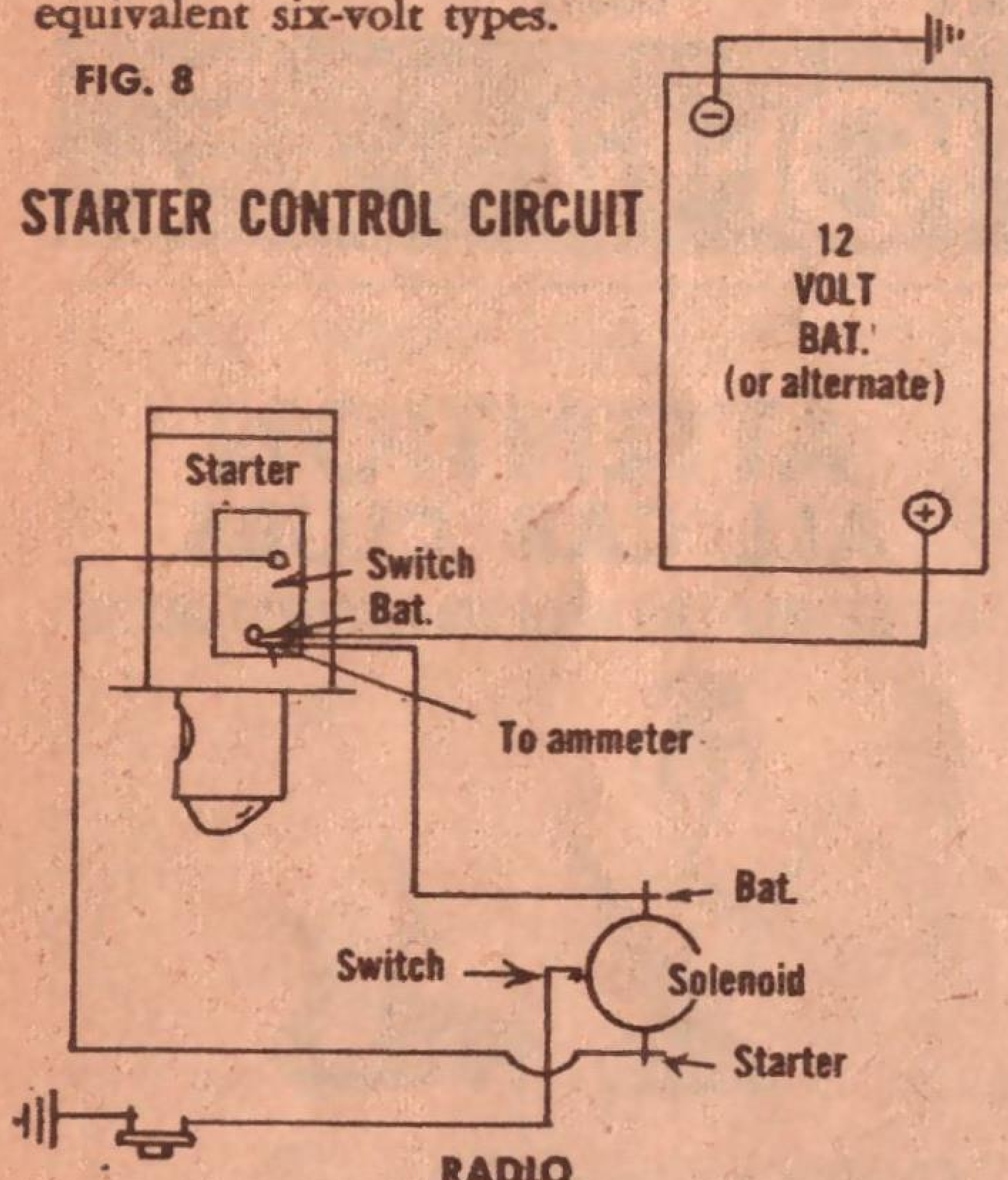
LIGHTING CIRCUITS

It would be wise to convert all the light bulbs in the car to twelve volts. This sounds like an expensive deal but actually the change-over could be made in the average car for seven or eight dollars. Twelve-volt bulbs will fit the six-volt sockets and no other changes would have to be made in the lighting circuits. Chances are the bulbs in the car are old anyway and a change wouldn't hurt, especially as far as the headlamps are concerned. It isn't widely known but light bulbs lose some of their brightness as they get older and sometimes they should be changed before they burn out just to restore the original brilliance of the lighting system. The original fuses and circuit breakers in the circuits could be used with the twelve-volt lamps although the amperage draw of the twelve-volt types is much less than that of six-volt lamps. A secondary advantage of twelve-volt bulbs is that they have a life expectancy up to twice that of equivalent six-volt types.

FIG. 8


STARTER CONTROL CIRCUIT

RADIO

A radio should be operated off the twelve-volt current from a standard twelve-volt battery by installing a resistor of the correct capacity between the radio and the Accessory terminal of the ignition switch, which is a radio's normal source of current. Resistors for this purpose can be bought from almost any store that sell radio parts. Install the resistor according to the directions that come with it. If two six-volt batteries were used it would be best to connect the radio lead to the load post of the relay. This would eliminate the resistor and cut the power consumption of the radio in half. (See Fig. 5).

IGNITION CIRCUIT

The ignition circuit would be stock. The only difference from the original six-volt circuit would be that the lead from the ignition switch to the ignition coil would be connected to the resistor for the twelve-volt coil. If a two-coil distributor is to be used each coil must have its own resistor. (See Fig. 1, 7).

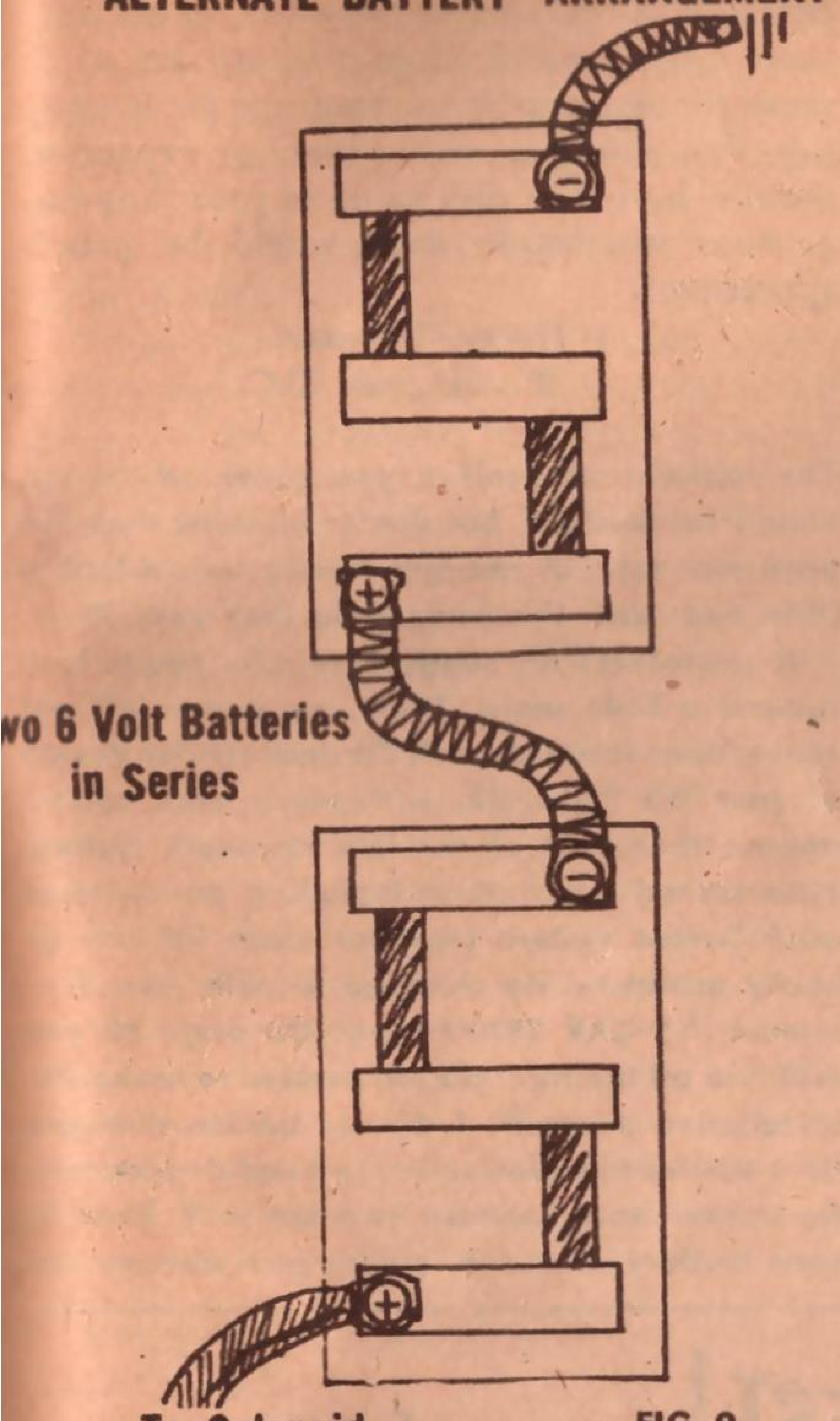
STARTER CONTROL CIRCUIT

Starting motor solenoids sometimes pose a problem when an engine change is made. Solenoids of some types are wound so that they are actuated by being grounded, and some are wound so that they must receive current to be actuated. The type of starter switch on the instrument panel is determined by the solenoid and it can be one of two general types: it can ground the circuit through the solenoid, or it can allow current to flow to the solenoid. (See Fig. 4, 8).

If the switch on the instrument panel is of the type that matches the solenoid on the starter of the new engine, it can be connected to the new solenoid and be used without alterations, but if the switch and solenoid don't match, another arrangement will have to be made. The most likely mismatched combination that will be encountered is a switch for a solenoid that must be grounded and a new solenoid that must receive current from the instrument panel switch. The solution to this problem is simple but it requires the use of both the old and new solenoids. The original solenoid and its switch are left as-is but the cable from the battery to the solenoid is connected to the battery post on the new solenoid. A wire is then run from the battery post on the new solenoid to the battery post on the original solenoid, and another wire is run from the starter post on the old solenoid to the switch post on the new solenoid. Then, when the original solenoid is actuated with the switch on the instrument panel, current flows from the battery post on the new solenoid, through the original solenoid, to the switch post on the new solenoid, causing the new solenoid to be actuated and close the circuit between its battery post and the starter.

HEATER MOTOR, OVERDRIVE CONTROL, HEAT INDICATOR, OIL PRESSURE INDICATOR, FUEL LEVEL INDICATOR, ELECTRIC FUEL PUMP

The circuits for these components must all originate at the relay so current will not flow



ALTERNATE BATTERY ARRANGEMENT

FIG. 9

through them when the ignition switch is Off. These circuits should originate at the Accessory post of the ignition switch. Disconnect them from this post and connect them to the Load post of the relay. (See Fig. 2).

WINDOW MOTORS, SEAT MOTORS, CONVERTIBLE TOP MOTOR, HORN, CIGARETTE LIGHTER, CLOCK

If a standard twelve-volt battery is used, the circuits for these components must be connected to the six-volt tap on the battery. Their amperage draw is too high for them to be served by the relay and it doesn't matter if they do work when the ignition switch is off.

If two six-volt batteries are used, connect the leads from these circuits to one end of the cable that connects the batteries together.

If the wires in any of the circuits have to be lengthened to reach the new source of current, be sure to use wire of the same size as the original and join the two pieces with a regular connector that clamps to the conductor, or solder them securely together. It is important that the joint be tight so it will conduct the same amount of current as the rest of the circuit. (See Fig. 3).

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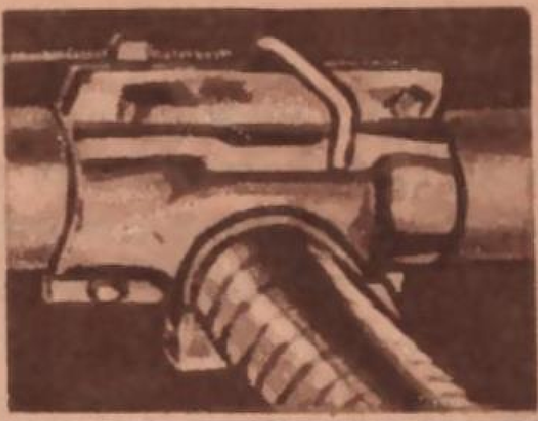

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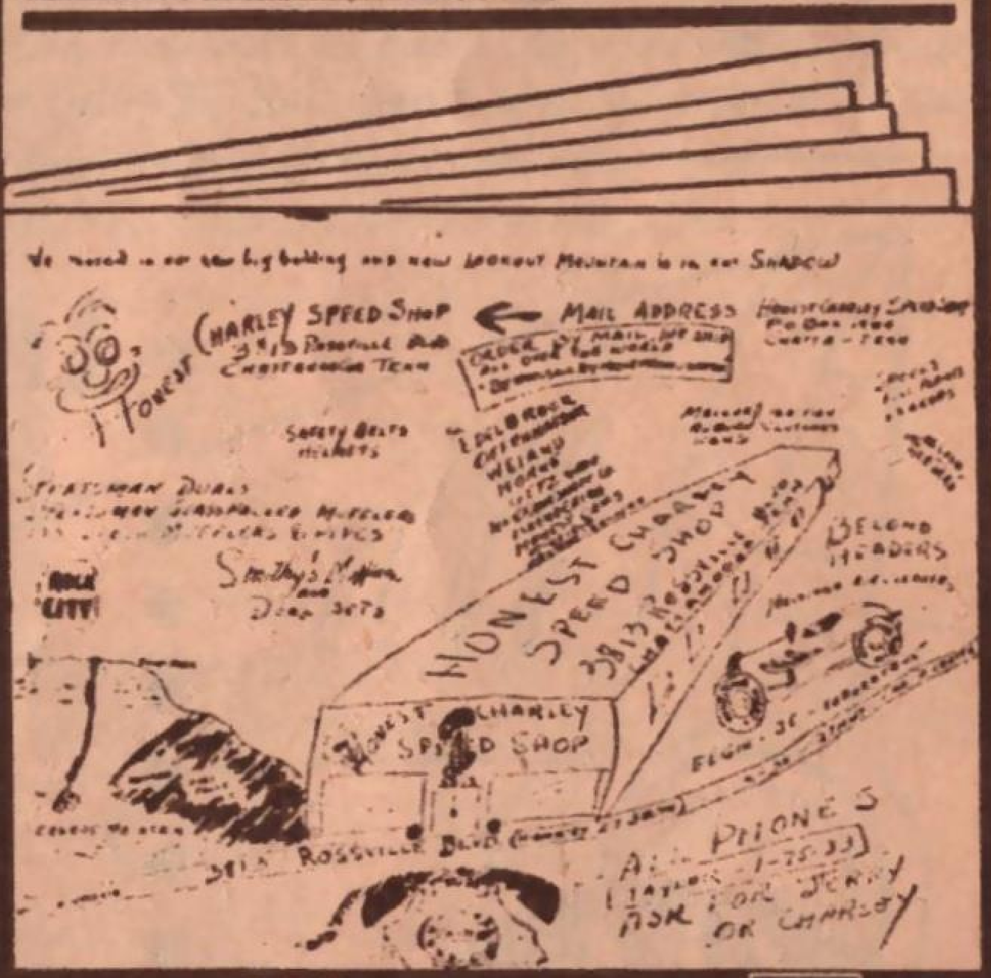

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CERNY'S BODY SHOP

PLYMOUTH FAN WITH QUESTIONS

Dear George:

I own a '53 Plymouth Cambridge two door and have several things that I want to do to it to alter its appearance. First I would like to replace my stock taillights with those from the '56 Plymouth. I would like to install them so that they match off evenly with the top of the fenders. Would this be possible? Can you also explain to me how to install an electrical push button set-up for my trunk lid. Would an electrical system such as this work on my hood also? Grille modifications planned are to remove the stock grille bar from the grille opening, then filling it with a piece of expanding metal — how does this sound to you? Any suggestions you might have would be greatly appreciated.

— *Harry Mummer*
Washington, D.C.

The taillight innovation you speak of, Harry, would be possible, but don't you think that this particular type of taillight styling would look a little odd with the body style that your Plymouth possesses? My suggestion is for you to look around a little more. There are many taillight conversions that would fit the rear fender design of your '53 Plymouth, with much more custom appeal than that of the '56 Plymouth styling. Your second question on installing an electrical push button system for your trunk lid can be easily answered by checking in with your September '55 CAR CRAFT issue. On page 52 you will find all the information needed to make this installation yourself. I do not advise that you do a similar installation in the hood department. No matter how cautious you are with keeping your battery in good order, you always run

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across a time when it goes dead unexpectedly, and not be able to get into your engine compartment in my estimation would be the worst! The expanded metal grille piece sounds great.

THE MAGIC TOUCH

Dear George:

I have seen many articles devoted to push button door installations. I now want to perform this bit of custom work on my car and wondered if you could tell me where I can procure "micro switches"? I would also like to know if there is any way possible to make the doors spring open farther when actuated electrically? Some added spring tension possibly?

— Bill Stewart
Aurora, Illinois

I don't recommend micro switches, Bill, as they are too sensitive and have a habit of actuating the doors while driving when a hard jolt, or bump is encountered. I recommend the standard push button setup, but if you insist on using the micro units, then you may purchase them at any aircraft surplus store. Added spring tension is a good plan, it can be accomplished by adding a small rubber bumper or strips of rubber material along inner door jamb.

FENDERLESS TAILLIGHTS FOR '47 FORDS

Dear George:

I have a '47 Ford club coupe that my dad and I have conservatively customized. We have nosed the hood, shaved the trunk and have removed the stock taillight assemblies. My problem is, what type of taillights can I install

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OM QUERIES continued

without placing them into the smooth, bulbous body that we now have achieved? We are working very slow on the car and have all the time in the world. The boys around here really go for CAR CRAFT magazine.

— John and George Kruse
Honolulu, T.H.

Thanks for the opportunity of letting me see your car, Mr. Kruse. You and your father have done a very nice job. I suggest that you incorporate the taillights into the rear bumper guards since you do not wish to install them into the rear of the body. We did a complete step-by-step story on building bumper guard taillights in our April '54 issue of CAR CRAFT, but unfortunately we are completely sold out of this particular issue. On page 38 of this issue you will find a '41 Ford convertible, belonging to Harry Costa, which possesses a similar type of taillights that I recommend. They consist of small windows being cut into the upper portion of each bumper guard, with the small cut out sections filled with contoured sanded blocks of clear plastic. To give the clear plastic blocks their reflecting power, pieces of checkered reflective Lucite is laminated to the back of the clear plastic blocks. The complete plastic lens assembly is then glued just inside the bumper guard using clear plastic glue. A partial metal plate is welded to the upper rear section of the bumper guards, and to these metal plates, small accessory light sockets are attached to the inside to provide lighting.

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SHAVING '56 CHEV HOOD — HOW TO?

Dear George:

Could you give me some suggestions on how to shave the hood of my '56 Chevrolet? As you know, they differ from past styling, having a center ridge running up to the stock ornament. Also would it be wise to use the new fiberglass-to-metal material now on the market for filling in the ornament's attachment holes? — *Jeff Robert, Indianapolis, Indiana*

One of the most critical aspects of customizing to come along for some time is that of nosing, or shaving, the '56 Chevrolet hood. I am not trying to discourage '56 Chev owners from having this innovation done to their cars, but I *DO NOT* recommend that a novice body man try the job unless he has a considerable amount of experience on how to shrink metal. The small raised ridge that the hood ornament is perched upon (not the center ridge) has to be shrunk down into the hood at a uniform height. Severe metal warpage is usually encountered which requires the professional touch to work the hood out properly. I suggest, Jeff, that you fill the attachment holes with brass, seeing how you will be working in this area with a torch considerably. I have not used the fiberglass material so cannot speak with authority.

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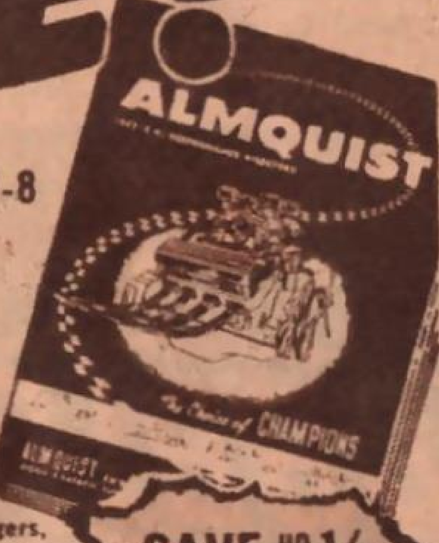

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CUSTOM QUERIES continued

'40 FORD QUERY

Dear George:

I own a '40 Ford and wish to restyle the grille. Since I have not seen any '40 Fords with grille changes, I'm somewhat lost for ideas—do you have any suggestions? Also I would like very much to change the hubcaps on the car, but am lost here too — can you give me any solutions? Thank you for your time in this matter.

— *Eugene Lindley*
Sturgis, South Dakota

Sometime ago, Eugene, there use to be an accessory panel that you installed in the '40 Ford grille, but I'm almost sure that these were discontinued. I can't understand you wanting to change the grille of the '40 Ford, because to me, when the car is restored to originality, the grille is beautiful in plain stock appearance — especially if the grille is rechromed. There are several hubcaps on the market for the early model Ford — one is the full moon chromed wheel cover, and the other is a hubcap that many refer to as the "baldy." It's a stock appearing hubcap but it has all trademarks removed and looks very good. In a very near future issue, we have scheduled a terrific story on reversed wheels. This is a fad that is currently sweeping through Northern California at the present time, and many of the early Ford owners have created some fantastic special appearances for their wheel covers by reversing and installing a later model wheel. It proves to be a very interesting feature article — so keep your eyes peeled for it and possibly you will be able to take advantage of the method used for your car.

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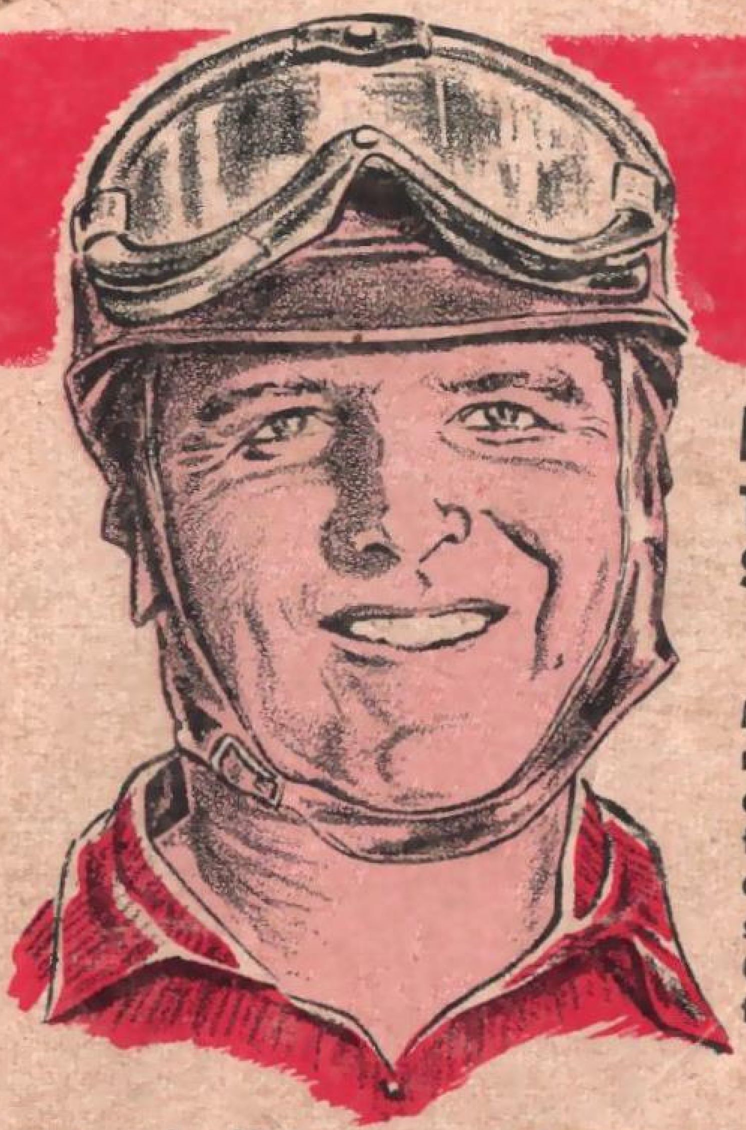

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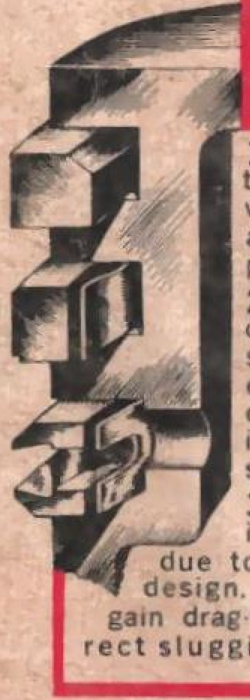

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